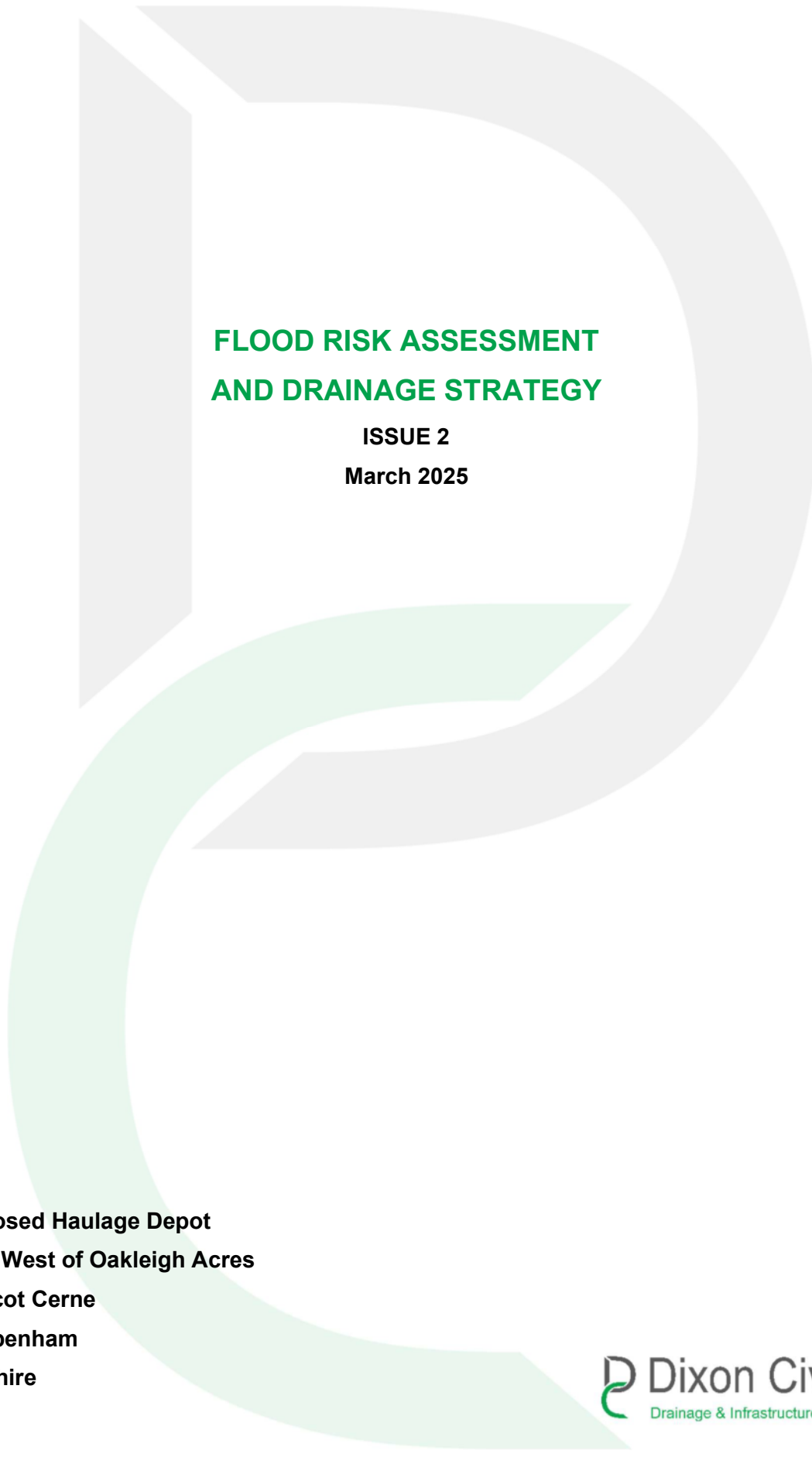




FLOOD RISK ASSESSMENT AND DRAINAGE STRATEGY

ISSUE 2
March 2025

**Proposed Haulage Depot
Land West of Oakleigh Acres
Draycot Cerne
Chippenham
Wiltshire**

Document Control

Client	D K Barnsley & Sons Ltd		
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Prepared by	A.Dixon BSc(Hons) CEng MICE		
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APPENDIX	TITLE	PRODUCED BY
Appendix A – Drawings by DC	Drainage Strategy Layout	Dixon Civils
Appendix B – Drawings by others	Site Location Plan	Poulsom Architectural Design
	Proposed Site Layout	Poulsom Architectural Design
	Topographical Survey	Poulsom Architectural Design
Appendix C – Sewer Records		
Appendix D - Calculations		

1.0 Introduction

This Flood Risk Assessment has been prepared on behalf of D K Barnsley & Sons Ltd for the proposed haulage depot on land west of Oakleigh Acres, Draycot Cerne, Chippenham, Wiltshire.

This report will provide flood risk information in support of the planning application and demonstrate how the appropriate means of sustainable surface water drainage will be achieved for the development without worsening flood risk in the area or putting itself at risk of flooding in line with national guidance.

The development proposal comprises the construction of a new depot building with associated car and lorry parking areas and landscaping. Access to the site is off the B4122. Refer to the Proposed Site Plan (324/103) prepared by Poulson Architectural Design Services enclosed within appendix B of this report.

This study has been prepared to advise on an appropriate surface water drainage scheme based on Sustainable Drainage Systems (SuDS) for the development site in line with national guidance, namely the National Planning Policy Framework (NPPF) and its accompanying Planning Practice Guidance (PPG)

2.0 Referenced Policies

Information sources used within this report are noted below along with the date they were referred to.

- Flood Map for Planning – Environment Agency (EA, accessed March 2025);
- Flood Map for Surface Water – Environment Agency (EA, accessed March 2025);
- Geological Map - British Geological Survey (BGS, Accessed November 2024);
- Groundwater Source Protection Zones Map - Environment Agency (EA, accessed November 2024);
- Wessex Water Sewer Records (October 2024); and
- Wiltshire Council Core Policy 67: Flood Risk
- Wiltshire Council Strategic Flood Risk Data Explorer.
<https://wiltscouncil.maps.arcgis.com/apps/webappviewer/index.html?id=28c00215d87b468a9a0cd79c63d3d270>
- Building Regulations 2015 – Approved Document H (Drainage and Waste Disposal);
- C753 The SuDS Manual (CIRIA, November 2015);
- National Planning Policy Framework (NPPF) (July 2021);
- Non-Statutory Technical Standards for Sustainable Drainage Systems (Defra, March 2015);
- Planning Practice Guidance (PPG) (March 2014);
- Sewerage Sector Guidance (SSG), Version 1.0 (Water UK, October 2019).

3.0 The Existing Site

The application site occupies approximately 12,250m² (1.23ha) of land occupied by agricultural land. Refer to the Existing Site Plan (324/102) prepared by Poulsom Architectural Design Services enclosed with this report.

The site is located within Flood Zone 1 and is bounded to the north by the B4122, industrial units and the M4 motorway, to the west by the St. Modwen industrial park, to the east by Chippenham Pitstop HGV services and south by open fields. Land use in the vicinity is predominantly industrial and agricultural fields.

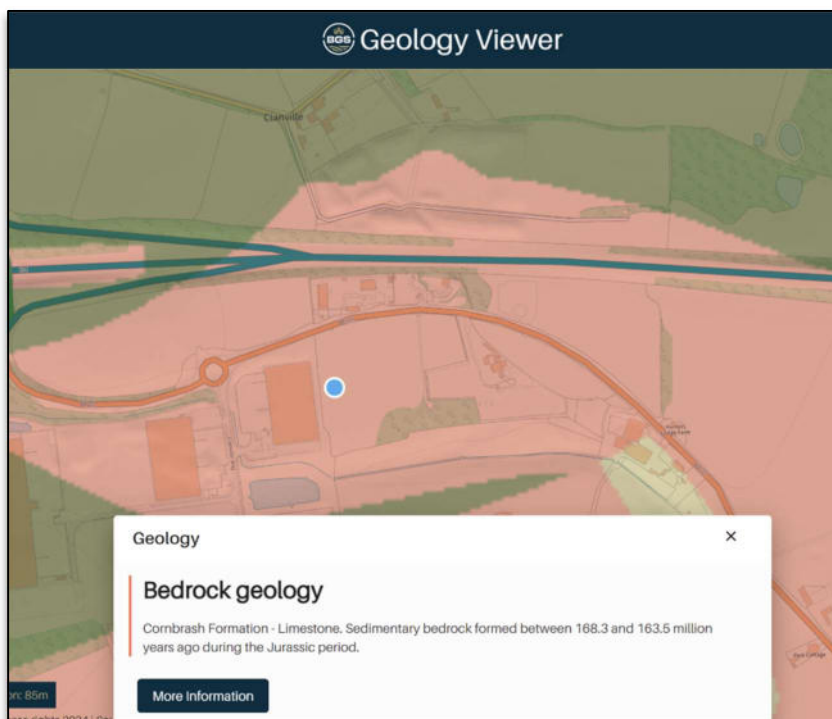
The topographical survey indicates that the site falls relatively gently to the south. Existing ground levels within the application site vary from approximately 87.00mAOD at the site's north west extent at the location of the proposed entrance, to 83.00m along the southern boundary and ditch line at approximately 81.50mAOD at its south west extent. The ground then falls at a steeper gradient to the south across the adjacent land toward a watercourse.

The topographical survey is included in DC Drawing 1160-01 [Proposed Drainage Strategy] in Appendix A.

3.1 Existing ground conditions

British Geological Survey (BGS) mapping indicates that the site is underlain by Cornbrash Formation – Limestone.

Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) map indicates that the geology underlying the site is classified as a Secondary A Aquifer. The site is located within Groundwater Sources Protection Zone 2c – subsurface activity.



**Figure 1: Bedrock Geology -
Extract from British Geological
Survey Geology of Britain
Viewer**

Source:
<https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer>

3.2 Existing Watercourses and Drainage Features

There is a shallow ditch along the western boundary of the application site, leading to the south and connects to the Bushes Leaze watercourse approximately 50m south of the site boundary. This watercourse originates in the adjacent St.Modwen park and heads from west to east parallel with the southern boundary of the application site. This watercourse becomes an Environment Agency designated main river approximately 200m further downstream and joins the River Avon 3km to the east.

3.3 Existing Public Sewers

Asset records obtained from Wessex Water indicate the presence of public foul sewers within the B4122 highway adjacent to the proposed site entrance. There are no surface water sewers within the vicinity of the site.

Refer to the Wessex Water sewer records within appendix C of this report.

3.4 Existing surface water drainage arrangement

The site is greenfield and has no formal drainage systems and is assumed to drain via infiltration and overland flow to the watercourse to the south via the western perimeter ditch line.

4.0 Evaluation of Flood Risk

This section presents an assessment of flood risk to the development and includes recommended flood risk mitigation measures if required. A summary of flood risk issues and proposed mitigation measures are recorded in Table 4.7 below.

4.1 Historic Flooding Events

There is no record of flooding at the site on the Wiltshire Council Strategic Flood Risk Data.

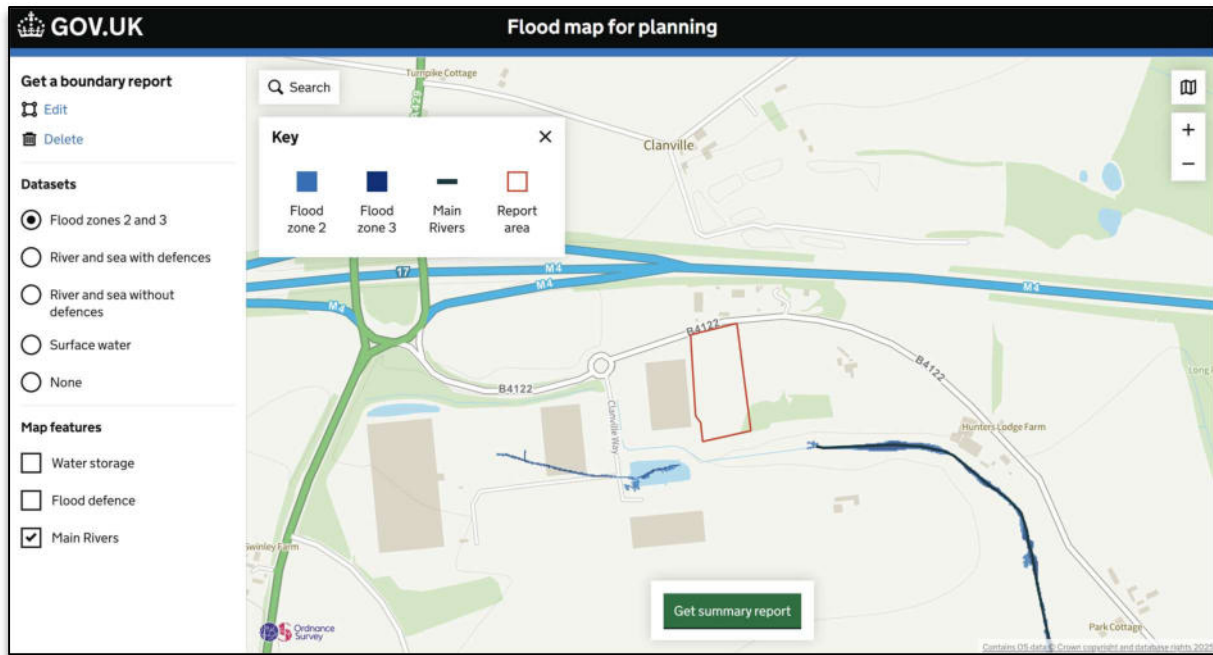
<https://wiltscouncil.maps.arcgis.com/apps/webappviewer/index.html?id=28c00215d87b468a9a0cd79c63d3d270>.

The nearest recorded flood incident occurred in 2009 adjacent to the M4 junction 17, caused by a blocked highway gully. It's location is approximately 500m to the west and is therefore not considered a risk.

4.2 Fluvial Flood Risk

The Flood Map for Planning (FMP) for the locality as produced by the EA is shown in the figure below and shows that the site lies within Flood Zone 1 (Low Risk).

NPPF PPG Flood Risk and Coastal Change (Table 3: Flood Risk Vulnerability and Flood Zone Compatibility) confirms that all development types are appropriate within Flood Zone 1.



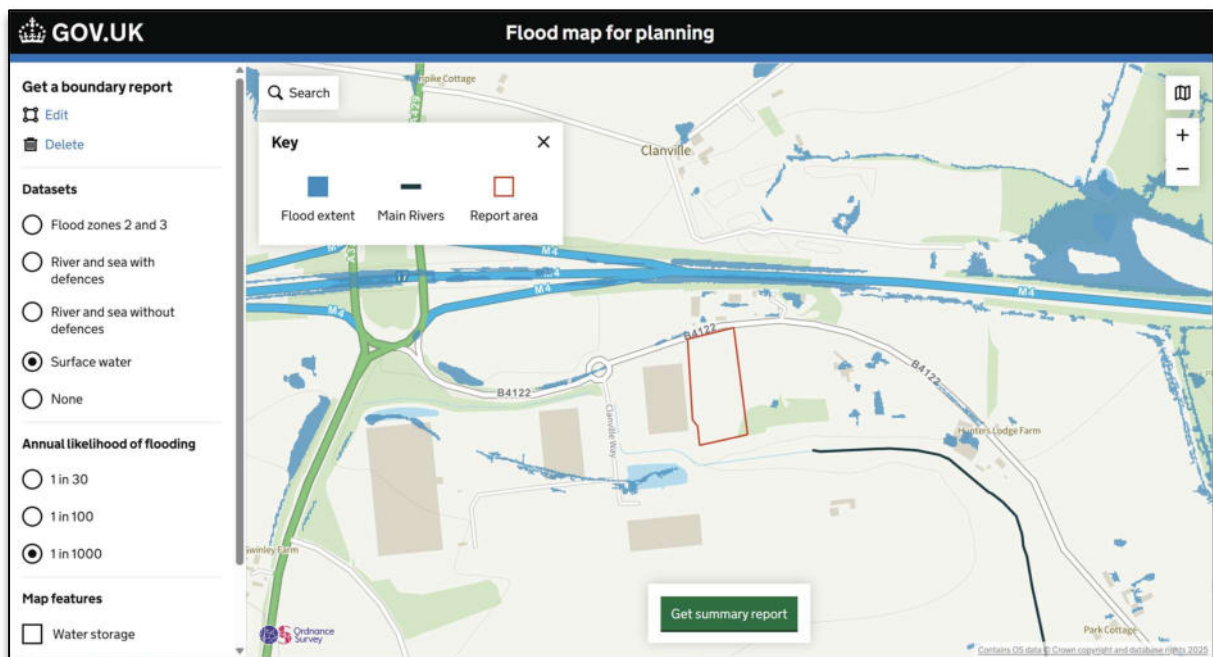
Flood Zone Map: Extract from Central Government's 'Flood Map for Planning' Mapping Portal

Source: <https://flood-map-for-planning.service.gov.uk/>

4.3 Surface Water Flooding

Surface Water Flood mapping produced by the EA highlights a low risk of surface water build up within the attenuation basin for the adjacent business park to the south west of the site.

This basin and associated watercourse runs at a lower level, approximately 50m to the south of the application site, therefore the risk is low and no mitigation required.



Surface Water Flood Map: Extract from Central Government's 'Flood Map for Planning' Mapping Portal

Source: <https://flood-map-for-planning.service.gov.uk/>

4.4 Sewer Flooding

Wessex Water records indicate there are no surface water sewers in the vicinity of the site. The foul sewer within the B4122 originates at the entrance to the site and heads to the east along the carriageway away from the site. In the unlikely event of flooding from this sewer, flows would remain within the carriageway flowing to the east away from the site.

Refer to the Wessex Water sewer records within appendix C.

Risk of flooding from sewers is therefore low.

4.5 Groundwater

Wiltshire Council Strategic Flood Risk Data records the site as being in an area at risk of groundwater flooding. Ground investigations at the adjacent St. Modwens development however record groundwater in only two of sixteen trial pits as a slow seepage at the base of the pit (3m below ground level). Both of these trial pits were located south of the existing Bushes Leaze watercourse.

It is likely that the groundwater table is in hydraulic continuity with the watercourse to the south of the site at an approximate level of 78.0-80.0mAOD, some 3-5m below the proposed development area.

It is unlikely that groundwater levels could rise to the site surface and cause flooding, however if groundwater emergence was to occur, groundwater would follow the existing site topography, which falls to the south west towards the existing ditch and watercourse and flow off site without accumulating or causing flooding at the site.

Flood risk from groundwater is therefore considered to be low.

4.6 Flooding from reservoirs or other artificial sources

The EA Map 'Extent of Flooding from Reservoirs' indicates that the site is not at risk from flooding from a reservoir breach. Therefore, flood risk from artificial sources is considered to be Very low.

4.7 Summary of Flood Risk

Source of Potential Flooding to the Development Site	Flood Risk	Mitigation/Comments
Fluvial	Low	The site is located within Flood Zone 1 (Low Risk)
Public Sewers / Drains	Low	Wessex Water records indicate the presence of only foul water sewers which originate at the proposed site entrance, flowing to the east and away from the site.
Overland Flow	Low	EA mapping indicates the site is at Low risk of flooding from this source.
Groundwater	Low	The lowest existing ground level within the site is approximately 83.00mAOD, the groundwater table is likely to lie up to 3-5m below ground level in continuity with the watercourse running to the south of the site.
Artificial Sources	Very Low	EA Mapping confirms that the site is not located within an area at risk of flooding from this source.

5.0 Surface Water Drainage Proposals

Refer to DC Drawing 1160-01 [Proposed Drainage Strategy] in Appendix A.

This section of the report addresses how flood risk generated as a result of developing the site will be managed using sustainable control measures to ensure that flood risks are not increased on and off the site and how surface water is managed post development

5.1 Drainage Hierarchy

The surface water drainage strategy for the site has been prepared in accordance with the drainage discharge hierarchy from CIRIA C753 The SuDS Manual, where the first available option will be utilised as follows.

Technique		Summary
1	Infiltration to the maximum extent that is practical	Permeable surface car parking and geotextile wrapped attenuation proposed to maximise any available infiltration
2	To surface water body	Proposed solution – Flows attenuated and restricted to greenfield equivalent discharge to an existing watercourse.
3	To a surface water sewer, highway drain or another drainage system	Not required
4	To a combined sewer	Not required

5.2 Infiltration Design

Reasonable infiltration properties of Cornbrash Limestone enables the use of soakaways and permeable surfaces for drainage of the building roof and external hard surfaces.

Intrusive investigation works are not yet available for this site, however recent planning approved schemes adjacent to this site that have undergone extensive testing have revealed that infiltration is a potential means of surface water disposal.

BRE365 test results within the St.Modwen development recorded rates between 1.38×10^{-5} and 2.05×10^{-5} m/s. Testing for an extension to the Chippenham Pitstop lorry park to the east returned shallow infiltration rates of 8.14×10^{-5} m/s, however testing in this location at depth failed to drain.

As such, a conservative rate of 5.0×10^{-6} m/s has been assumed for the design of the drainage strategy for this site and the proposed cellular attenuation tank will be wrapped in a permeable geotextile to maximise any available infiltration.

Intrusive site investigation works, to include infiltration testing, will be required prior to construction to prove the infiltration capacity of the soils.

5.3 Attenuation Design

In accordance with Wiltshire Council's Level 1 Strategic Flood Risk Assessment, the maximum permitted discharge rate from the proposed development should be limited to the greenfield runoff rate for equivalent rainfall events, up to and including the 1% Annual Exceedance Probability (AEP), 1 in 100-year plus climate change return period event.

Based on the existing run-off rates, as generated by Autodesk's Infodrainage software tabled below, this equates to a QBAR discharge rate of 2.0l/s.

ICP SUDS / IH 124					
Details					
Method	ICP SUDS				
Area (ha)					0.94
SAAR (mm)					800.0
Soil					0.3
Region	Region 4				
Urban					0
Return Period (years)					0
Results					
Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 4	2.0	2.0	1.7	3.9	5.1

5.4 Combined Infiltration/Attenuation Design Proposal

Refer to DC Drawing 1160-01 [Proposed Drainage Strategy] in Appendix A.

Given the Variable nature of the soils reported in the adjacent developments, a conservative rate of infiltration combined with a greenfield restricted outflow has been used for the design.

Following intrusive investigation, the drainage design will be adjusted accordingly to utilise infiltration to the maximum extent possible.

Calculations indicate SuDS attenuation of 724m³ will be required to accommodate the proposed building, access road and parking, for all storm events up to and including the 100year + 45% climate change event with a peak outflow rate restricted to the greenfield QBAR rate of 2.0 l/s.

A swale and filter trench bordering the perimeter of the hard surfaced areas will capture runoff from the access road and car/lorry park. The filter trench is connected to a large cellular soakaway attenuation tank below the lorry parking area via a petrol interceptor.

A flow restricted outfall of 2.0 l/s discharges to the existing ditch to the west via a hydrobrake flow control chamber.

Permeable surfacing is proposed within the car parking areas, infiltrating to their maximum extent before overflowing to the swale and filter drain network draining the larger impermeable surfacing.

Roof water will discharge to a rainwater harvesting tank and have an overflow connection the filter drain network.

Refer to the Infodrainage design calculations enclosed in appendix D of this report.

5.5 Design Exceedance

Should the drainage system and SuDS fail under extreme events or blockages, floodwaters will follow the natural topography toward the ditchline in the south west corner of the site and Bushes Leaze watercourse mirroring the existing pre-development arrangement.

Exceedance routes are shown on DC drawing 1160-01 [Proposed Drainage Strategy] in Appendix A

5.6 Water Quality

Whilst roof water is considered fairly uncontaminated, runoff from the access road and parking areas can be susceptible to hydrocarbon contamination, which in this instance will be intercepted within the grass swales and permeable stone and textiles that make up the infiltration trenches before discharging to ground and watercourse via a cellular soakaway and petrol interceptor.

Water quality has been assessed in line with the Simple Index approach from Chapter 26 of CIRIA C753 The SuDS Manual:

1. Step 1 – Allocate suitable pollution hazard indices for the proposed land use.
2. Step 2 – Select SuDS with a total pollution mitigation index that equals or exceeds the pollution hazard index.

Pollution Hazard Indices

Below figures are obtained from Table 26.2 CIRIA C753 The SuDS Manual '*Pollution hazard indices for different land use classifications*'

Land use	Pollution hazard level	Total suspended solids (TSS)	Metals	Hydrocarbons
Haulage Yard / Lorry Park	High	0.8	0.8	0.9

Pollution Mitigation Indices

Where the mitigation index of an individual component is insufficient, two components (or more) in series will be required, where Total SuDS mitigation index = mitigation index 1 + 0.5 (mitigation index 2)

Below figures are taken from Table 26.3 & 26.4 CIRIA C753 The SuDS Manual '*Indicative SuDS mitigation indices for discharge to surface waters and groundwater*'

SuDS Feature	Total suspended solids (TSS)	Metals	Hydrocarbons
Vegetated Filter Strip underlain by a soil with good contaminant attenuation potential of at least 300mm depth	0.6	0.5	0.6
Filter Drain	0.2 (0.4/2)	0.2 (0.4/2)	0.2 (0.4/2)
A soil with good contaminant attenuation potential of at least 300mm depth beneath the proposed soakaway *	0.2 (0.4/2) *	0.15 (0.3/2) *	0.15 (0.3/2) *
Total	1	0.85	0.95

* As the proposed strategy also utilises an overflow to a watercourse and not all flows will exit the system via infiltration, the Mitigation Indices for metals and hydrocarbons would fall just below the Hazard Indices when utilising SuDS features only. As such, the addition of an oil separator will ensure that the required standard for removal of metals and hydrocarbons are achieved.

The pollution mitigation indices for the proposed drainage system therefore exceed the pollution hazard indices and provide suitable pollutant removal.

5.7 Adoption

The onsite drainage components will remain private and be the maintenance responsibility of the property owners.

5.8 Maintenance

Regular inspection and maintenance are important for the effective operation of the SuDS systems as designed. The regular maintenance of SuDS should be carried out in line with C753 The SUDS Manual (CIRIA, November 2015) or as per manufacturer's specification.

Pipework and Catchpits

It is not envisaged that silt build up within the pipework systems will require rigorous maintenance. Notwithstanding this, a suitable maintenance regime for the systems will comprise of routine inspection (every six months) and silt removal as necessary.

Petrol Interceptor

The separator should be maintained and serviced in accordance with the manufacturer's instructions.

Permeable Paving/Surfacing

Permeable surfaces need to be regularly cleaned of silt and other sediments to preserve the infiltration capability of the surface. Suggested brushing regime would be at the end of winter to collect winter debris, mid-summer to collect dust, vegetation and grass-type deposits and after autumn leaf fall.

Filter Trench

The main maintenance requirement is mowing to retain grass lengths of 75-150mm across the treatment surface to assist in pollutant filtering and sediment retention. Other maintenance activities are likely to include removal of litter and debris with removal of sediments as required.

Cellular Soakaway

It is not envisaged that silt build up within the cellular crate systems will require a rigorous maintenance regime so long as silt is removed from upstream catch pits and inspection chambers on a regular basis. Camera access can be gained via inspection chambers and inlet pipework to the soakaway. Silt removal can be achieved by jetting the inspection tunnels, where a standard jet head with rear facing nozzles should be used. The head should be fed to the far end of the crate tunnel via the nearest inspection chamber, activated and retracted. As the nozzle is removed, debris will be swept back into the inspection chamber where it can then be removed with the use of a standard gully sucker.

6.0 Foul Water Drainage Proposals

Refer to DC Drawing 1160-01 [*Proposed Drainage Strategy*] in Appendix A.

6.1 Proposal

It is proposed to connect foul water flows from the site into the existing Wessex Water public sewer network within the B4122 to the north.

The existing levels across the site do not present an opportunity to connect the proposed drainage via gravity, therefore a pumped foul solution will be required for the development. It is proposed that a private package pumping station is located within the car park with a rising main routed along the private access road to a break chamber before discharging to the Wessex Water network via gravity.

6.2 Sewer Capacity

A capacity check has been submitted to Wessex Water and a response is awaited.

6.3 Adoption

The foul water drainage components will remain private and be the maintenance responsibility of the property owners.

6.4 Maintenance

All proposed foul drainage infrastructure will be maintained privately. The pump station will be managed in accordance with the manufacturer's instructions.

7.0 Conclusion

The proposed haulage depot development will generate an increase in impermeable surface area when compared to existing. Surface water runoff from the new impermeable surfaces will be directed to sustainable drainage systems that dispose of water via infiltration and a restricted rate to the adjacent watercourse at the greenfield QBAR equivalent flow rate.

On site storage and infiltration will be provided within permeable surfacing, filter trenches and cellular soakaway Sustainable Urban Drainage Systems (SUDS). The SUDS features have been designed to accommodate the 1 in 100 year storm, including a 45% allowance for climate change, in accordance with NPPF guidance.

Foul flows from the proposed building will be pumped to a nearby public foul water sewer via a private package pump station.

The proposed SUDS and all other foul and surface water drainage components will be maintained by the owners of the property. The pump station and petrol interceptor will be managed in accordance with the manufacturer's instructions.

This study has been undertaken in accordance with the principles set out in NPPF and we can conclude that providing the development adheres to the conditions advised in this report, the proposals can be accommodated without increasing flood risk within the locality in accordance with objectives set by Central Government and the EA and meet the requirements set out by the Wiltshire Council Core Policy 67: Flood Risk.

Dixon Civils Ltd

Issue 2 - March 2025

APPENDIX A

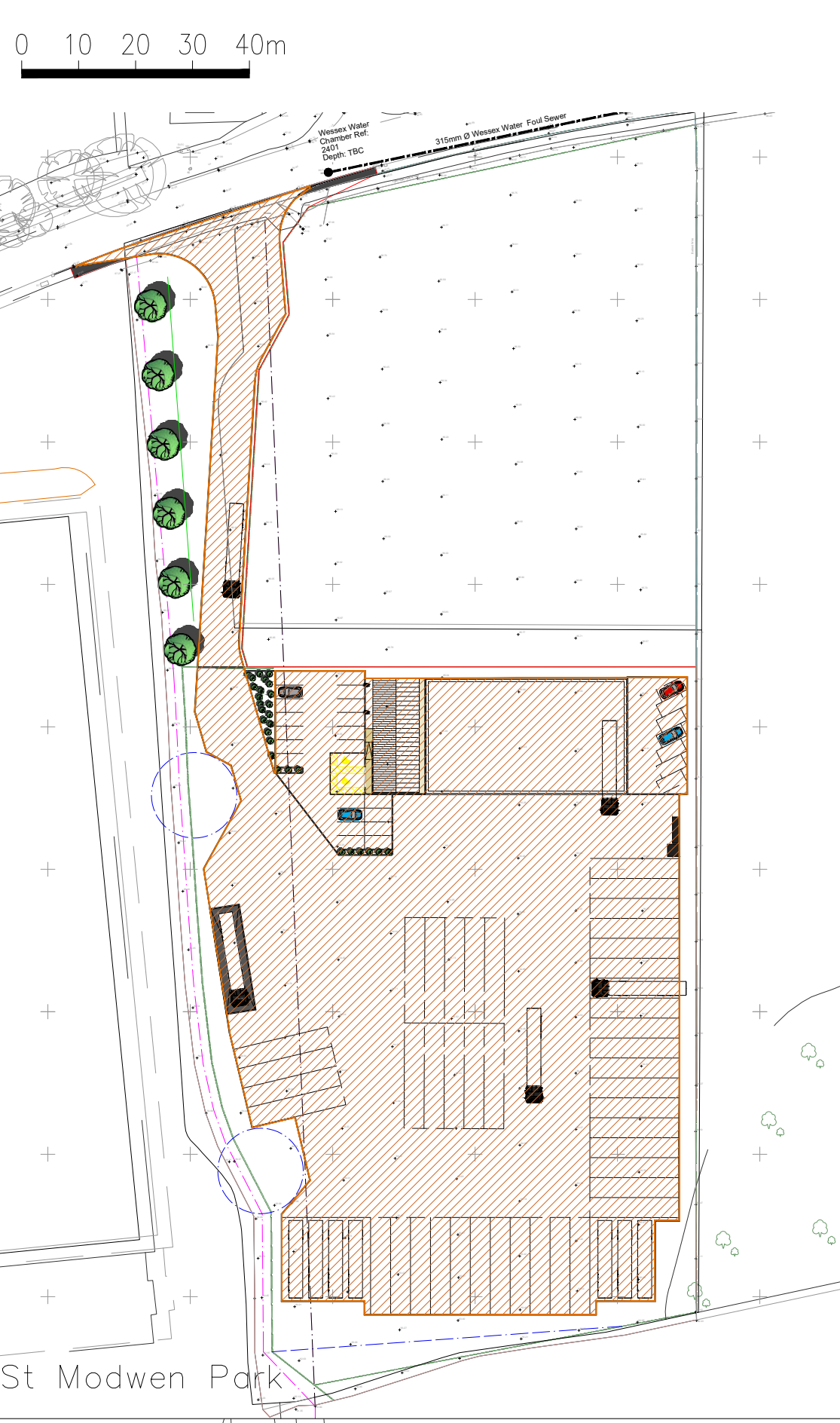
Drawings By Dixon Civils

Drawing ref. 1160-01

Proposed Drainage Strategy



INSET: IMPERMEABLE CATCHMENT CONTRIBUTING TO SUDS TANK
SCALE: 1:1000



- GENERAL NOTES:**
- DO NOT SCALE FROM THIS DRAWING.
 - ALL DIMENSIONS SHOWN ARE IN METRES UNLESS STATED OTHERWISE.
 - THIS DRAWING IS BASED ON TOPOGRAPHICAL SURVEY COMPILED BY: D&H SURVEYS 2024
 - ALL LEVELS ARE IN METRES AND RELATE TO THE ORDNANCE SURVEY LEVEL.
 - THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT SCHEME DRAWINGS AND SPECIFICATIONS.
- KEY:**
- Proposed Private Surface Water Drain, Inspection Chamber & Invert Level
 - Proposed Surface Water Catchpit Chamber
 - Flow Control Chamber
 - Proposed Grass Grid Paving
 - Flood Flow Route (Over 1:100yr+40% storm event)
 - Proposed Surface Water Headwall
 - Proposed Cellular Tank / Soakaway
 - Proposed swale and filter trench
 - Proposed Private Foul Water Drain, Inspection Chamber & Invert Level
 - Proposed foul water rising main
 - Existing Public Foul Water Sewer
 - Existing Ditch

C	Swale Extents Revised	AD	27.03.25
B	Swale Extents Revised	AD	13.02.25
A	Flood Risk Assessment Issue	AD	26.11.24
-	FIRST ISSUE (DRAFT)	AD	12.11.24
Rev	Description	Dm	Date

Dixon Civils
Drainage & Infrastructure Design
www.DixonCivils.com 01249 490813 Enquiries@DixonCivils.com

CLIENT: MR BARNSELY

JOB TITLE: LAND WEST OF OAKLEIGH ACRES
DRAYCOT CERNE
CHIPPENHAM

DRAWING TITLE: PROPOSED DRAINAGE STRATEGY

DATE: Nov 2024	DRAWN: AD	ISSUED FOR: COMMENT
DRAWING NO: 1156-01	REV: C	SCALE: 1:500 @ A1

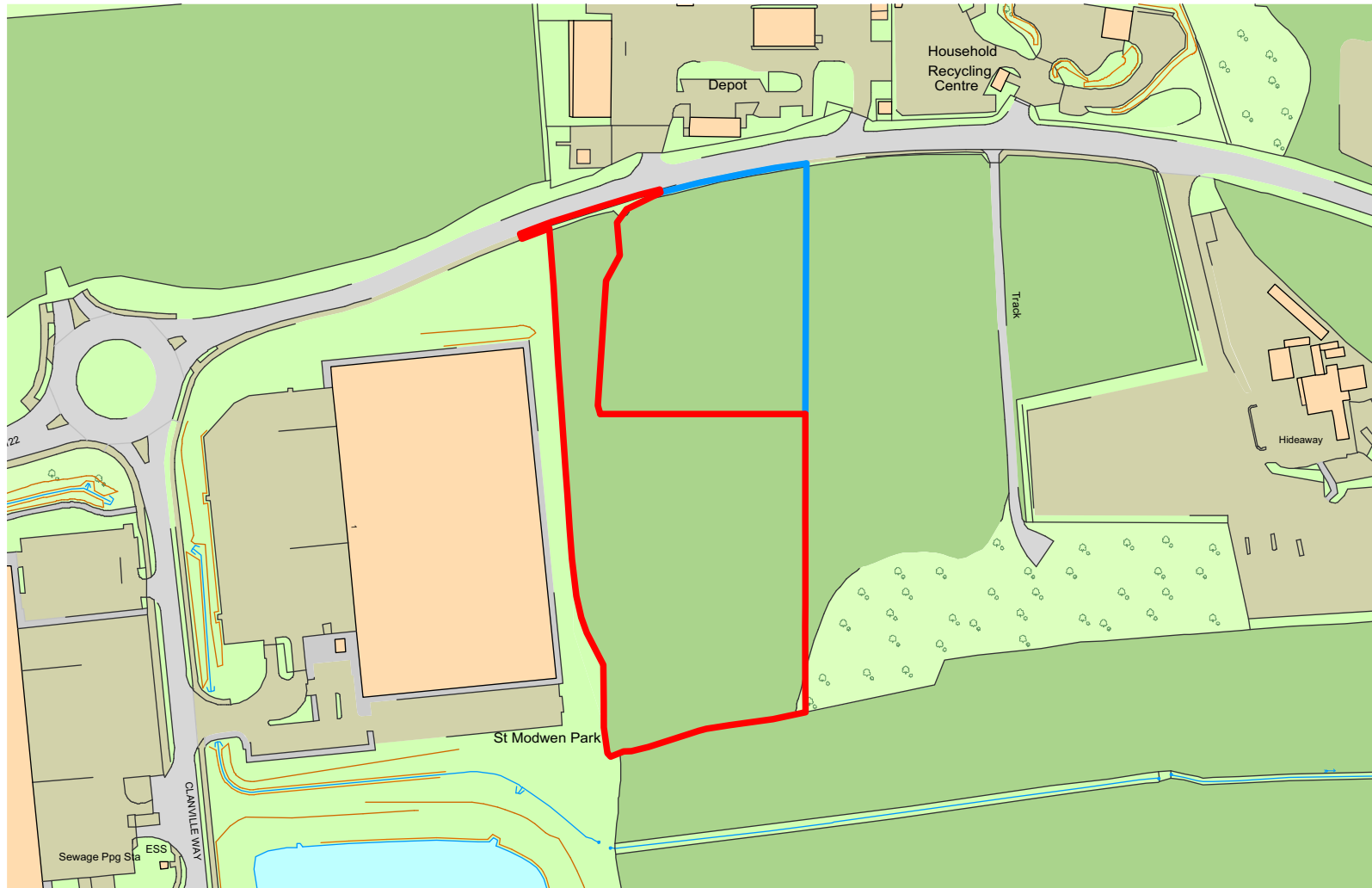
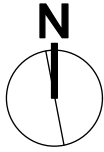
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APPENDIX B

Drawings By Others

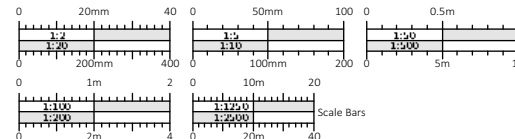
Drawing ref. 234-101	Site Location Plan (Poulsom Architectural Design)
Drawing ref. 234-102	Existing Site Plan (Poulsom Architectural Design)
Drawing ref. 234-103	Proposed Site Plan (Poulsom Architectural Design)



Notes

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- * Before the start of work all site measurements, angles & levels must be checked by the contractor in the event of any inaccuracies on this drawing no liability or responsibility will be accepted once work has started.
- * Only the materials on this drawing are to be used. Any substitutions must be of a similar quality & standard as that stated. All materials are to be used in accordance with manufactures instructions unless otherwise directed.
- * All construction projects large and small are subject to the CDM Regulations (2015). If the development will be for a domestic Client or less than 30 days in duration then the responsibility for Health and Safety is then passed onto the Main Contractor. In all cases the Client may devolve the responsibility to a CDM Planning Supervisor, who will act on the Clients behalf. Please refer to Panning Supervisor for advice.
- * Before starting work you need to check if any asbestos is present, in Commercial properties there should be a plan/register - [Ask to see it](#). You need to check that the plan covers the area of the building that you will be working in and if you are doing refurbishment work that it includes a survey that tells you what types of asbestos is present and its condition. If there is no Register or survey or the report is not clear - [Do not start work](#).

Site Location Plan - Scale 1:2500



do not scale this drawing. check all dimensions on site. this drawing is only to be used on the site for which designed all materials specified are subject to confirmation on site prior to works commencing. figured dimensions and levels to be used. any inaccuracies must be notified to Poulsom Architectural Design Services. detail drawings and large scale drawings take precedence over smaller drawings.

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PRELIMINARY		TENDER	
PLANNING	✓	CONSTRUCTION	



Client Name -	Mr Barnsley	Scale -	1:2500 @ A4
Site -	Land West of Oakleigh Acres, Draycot Cerne, Chippenham, Wiltshire, SN15 5LH	Date -	June 2024
Drawing Title -	Site location plan	Drawn -	RP

Revision Description	
Drawing No.	Rev.
324/101	-

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- * General Note - the contractor must comply with all aspects with current building regulations & relevant building standards & practice including specifically agreed with planning officer.
- * Before the start of work all site measurements, angles & levels must be checked by the contractor in the presence of the surveyor and the necessary records must be completed and sent to the client.
- * The materials to be used must be of the best quality & must be used in accordance with the manufacturer's instructions.
- * All construction projects large and small are subject to the CDM Regulations 2015. If the development is not for domestic use, the client must appoint a competent person to be responsible for health and safety on site.
- * The client must ensure that the contractor is fully insured for public liability, employer's liability, and professional indemnity.
- * The client must ensure that the contractor is fully insured for public liability, employer's liability, and professional indemnity.
- * The client must ensure that the contractor is fully insured for public liability, employer's liability, and professional indemnity.



Picture No.1



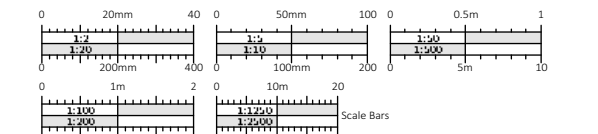
Picture No.2



Picture No.3



Picture No.4



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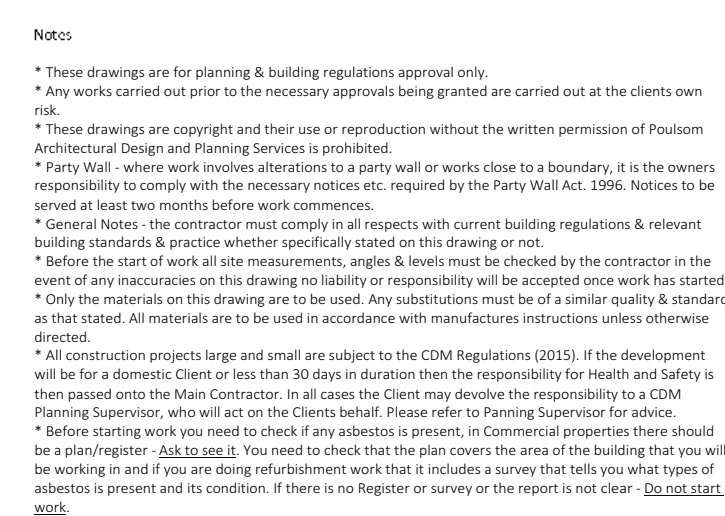
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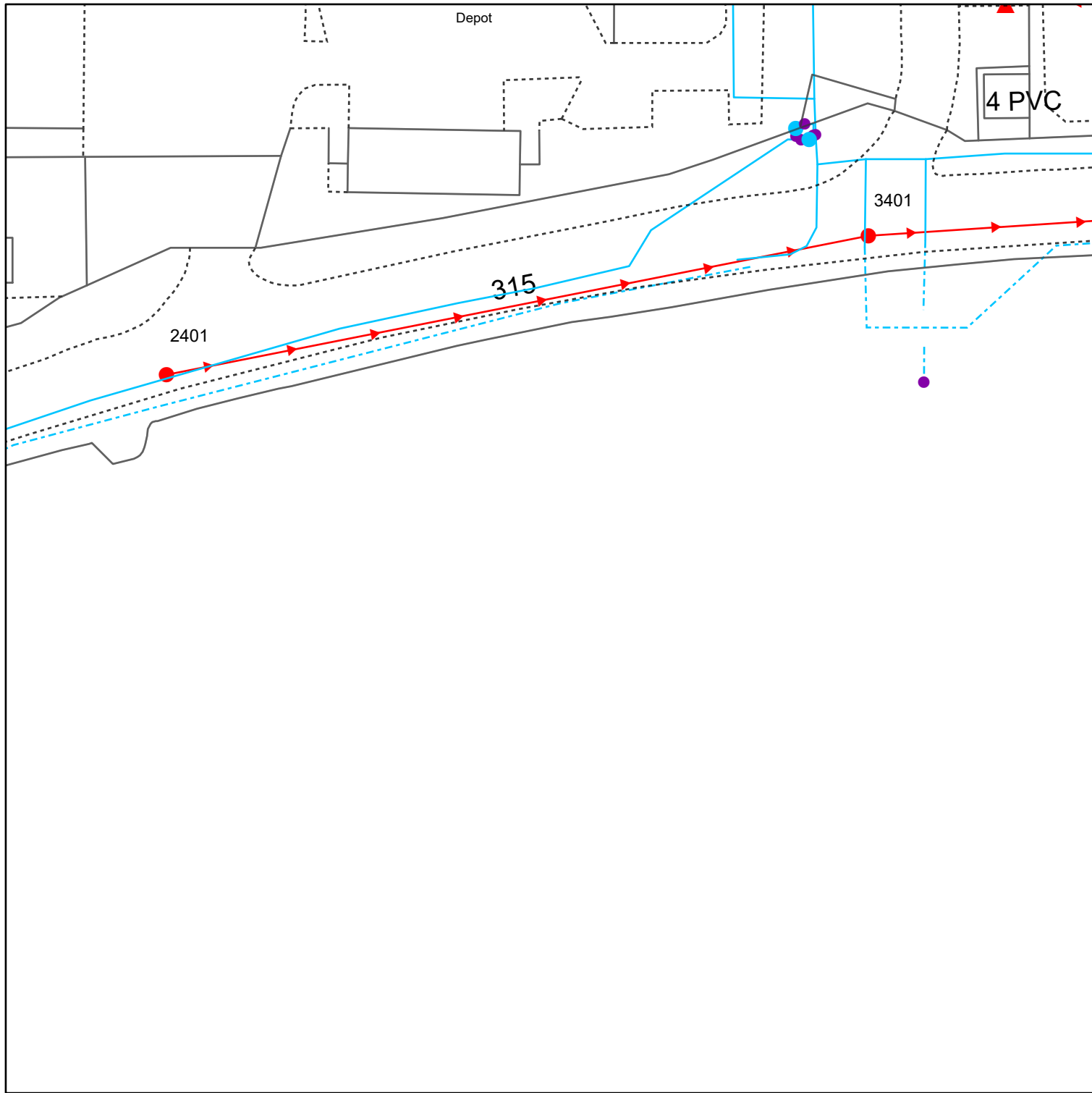


Buff textured 600x600mm paving slabs to entrance of Office.

APPENDIX C

Wessex Water Sewer Records

Wessex Water Network Map



Reproduced from the Ordnance Survey map by permission on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright . Licence 100019539.

WATER MAINS		SEWERS		STRATEGIC PUBLIC		PRIVATE SECTION 104		OTHER WESSEX PIPES		NON-WESSEX / UNKNOWN	
	Distribution		Foul						Rising Mains		Private Rising Mains
	Washout		Surface						Standby Rising Mains		Culverted Watercourse
	Raw Water		Combined						EDM Effluent Disposal		Highway Drain
	Abandoned		Abandoned						Overflow		Use Unknown
	Private	Colours generally indicate the use of the sewer/drain (i.e Red - Foul, Dark Blue - Surface, Magenta - Combined/Dual Use, Light Green - Highway Drain, Mid Green - Overflow).									
FITTINGS		Some styles of line and symbol are shown on the key in sample/typical colours.									
	Hydrant	STRUCTURES			Pumping Station - Surface						
	Other		Manhole - Foul		Pumping Stn - Foul/Combined						
			Manhole - Surface		Gully						
			Manhole - Combined		Vent Column						
			Inlet		Rodding Eye						
			Outfall		Catchpit						
			Lamphole		Flushing Chamber						
			Bifurcation - Foul		Soakaway						
			Bifurcation - Surface		Non Return Valve						
			Bifurcation - Combined		Air Valve						
			Combined Sewage Overflow		Hatch Box		Washout				
Information in this map is provided for identification purposes only. No warranty as to accuracy is given or implied. The precise route of pipe work may not exactly match that shown. Wessex Water does not accept liability for inaccuracies. Sewers and lateral drains adopted by Wessex Water under the Water Industry (Schemes for Adoption of Private Sewers) Regulations 2011 are to be plotted over time and may not yet be shown. In carrying out any works, you accept liability for the cost of any repairs to Wessex Water apparatus damaged as a result of your works. You are advised to commence excavations using hand tools only. Mechanical digging equipment should not be used until pipe work has been precisely located. If you are considering any form of building works and pipe work is shown within the boundary of your property or a property to be purchased (or very close by) a surveyor should plot its exact position prior to commencing works or purchase. If you are proposing to build over or near Wessex Water's apparatus you should contact the Developer Services Team, tel: 01225 526333 or e-mail: developer.enquiries@wessexwater.co.uk to discuss your proposals. Details of assets within Wessex Water's land ownership are unavailable through this service.											
OTHER STRUCTURES									Chamber		
	Attenuation Tank		Tunnel								
	Storage Tank		Interceptor								
 Wessex Water YTL GROUP											
Date:		29/07/2024									
Centre:		392294E, 179453N									
Scale:		1:625 (when printed at A4 size)									

APPENDIX D

Calculations

Project:: Proposed Lorry Depot Draycot Cerne	Date: 27/11/2024			 Dixon Civils Drainage & Infrastructure Design
	Designed by: AD	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Phase	Company:: Dixon Civils			



Tank

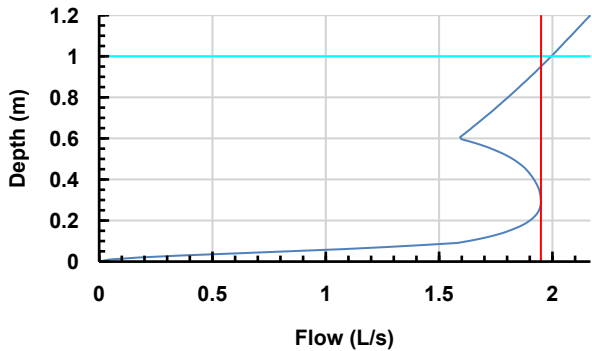
Type : Tank

Outlets

Outlet

Outgoing Connection	(None)
Outlet Type	Hydro-Brake®
Invert Level (m)	81.000
Design Depth (m)	1.000
Design Flow (L/s)	2.0
Objective	Minimise Upstream Storage Requirements
Application	Surface Water Only
Sump Available	☒

Unit Reference	SHE-0067-2000-1000-2000
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Project:: Proposed Lorry Depot Draycot Cerne	Date: 27/11/2024			 Dixon Civils Drainage & Infrastructure Design
	Designed by: AD	Checked by:	Approved By:	
Report Title: Rainfall Analysis Criteria	Company:: Dixon Civils			

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

Project: Proposed Lorry Depot Draycot Cerne	Date: 27/11/2024		
	Designed by: AD	Checked by:	Approved By:
Report Title: UK and Ireland Rural Runoff Calculator	Company: Dixon Civils		


Dixon Civils
 Drainage & Infrastructure Design

ICP SUDS / IH 124

Details

Method	ICP SUDS
Area (ha)	0.94
SAAR (mm)	800.0
Soil	0.3
Region	Region 4
Urban	0
Return Period (years)	0

Results

Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 4	2.0	2.0	1.7	3.9	5.1

Project:: Proposed Lorry Depot Draycot Cerne		Date: 27/11/2024		 Dixon Civils Drainage & Infrastructure Design
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: AD	Checked by:	
		Company:: Dixon Civils		



Critical Storm Per Item: Rank By: Max. Avg. Depth

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 (%)
Tank	FSR: 100 years: +45 %: 960 mins: Winter	81.993	81.993	0.993	0.993	40.3	716.896	0.000	239.640	2.0	193.391	1507	0.844

Project:: Proposed Lorry Depot Draycot Cerne	Date: 27/11/2024		
	Designed by: AD	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Company:: Dixon Civils		

D Dixon Civils
Drainage & Infrastructure Design

Status

OK

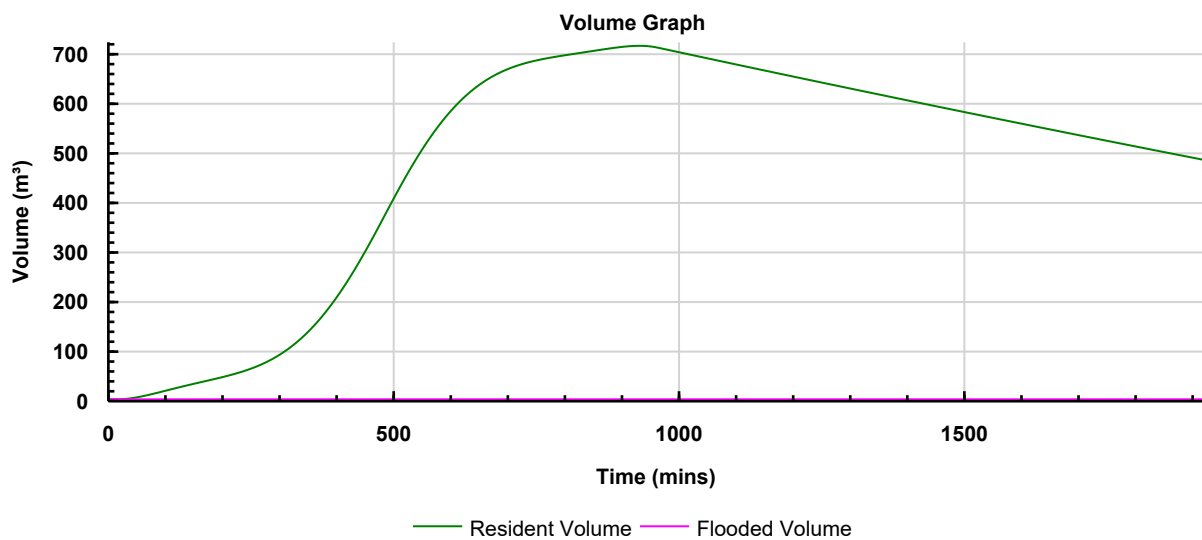
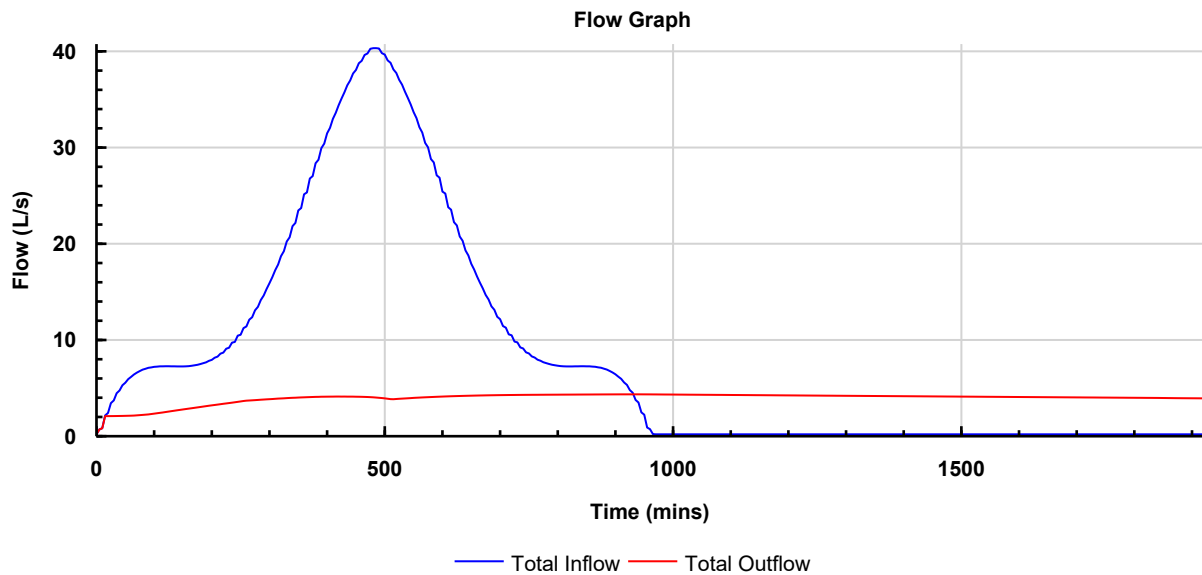
Project:: Proposed Lorry Depot Draycot Cerne	Date: 27/11/2024		
	Designed by: AD	Checked by:	Approved By:
Report Details: Type: Stormwater Control Results Storm Phase: Phase	Company:: Dixon Civils		



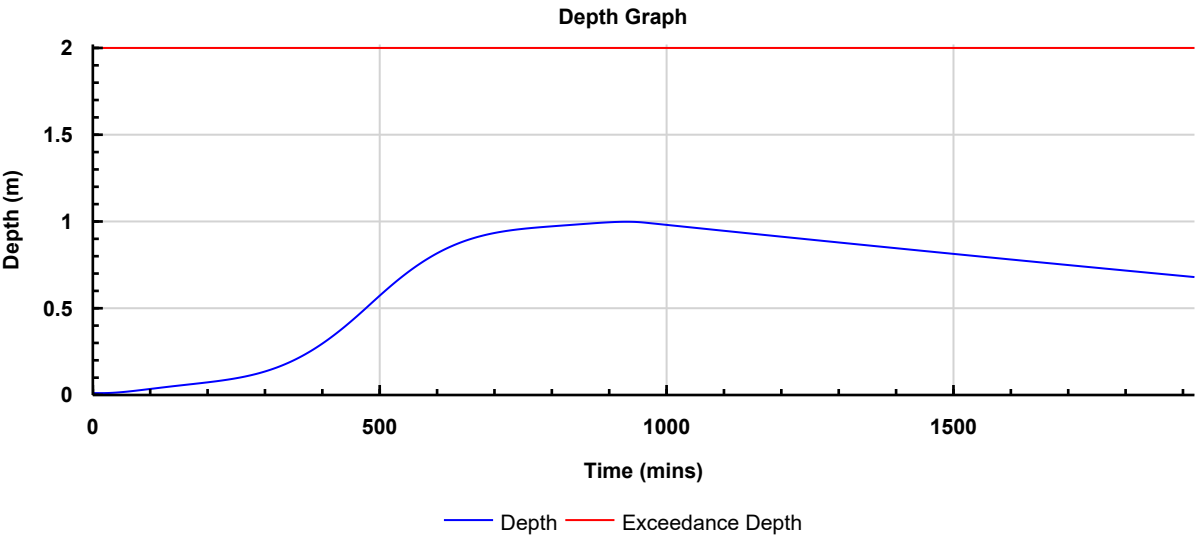
Tank
Critical Storm: FSR: 100 years: Increase Rainfall (%): +45: 960 mins: Winter

Type : Tank

Graphs



Project:: Proposed Lorry Depot Draycot Cerne	Date: 27/11/2024		
	Designed by: AD	Checked by:	Approved By:
Report Details: Type: Stormwater Control Results Storm Phase: Phase	Company:: Dixon Civils		





FOR MORE INFORMATION CONTACT US AT:

Enquiries@DixonCivils.com

01249 490813

www.DixonCivils.com