

Flood Risk Assessment at Moto Leigh Delamere

Final Report

August 2025

Prepared for:

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This report describes work commissioned by Gridserve, by an instruction dated 19th June 2025. The Client's representative for the contract was Emma Harding of Gridserve. Timea Faber and Olivier Saillofest of JBA Consulting carried out this work.

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Contents

Executive Summary	3
1 Introduction	4
1.1 Terms of reference	4
1.2 FRA requirements	4
2 Study Area	5
2.1 Existing site	5
2.2 Proposed development	6
2.3 Topography	6
2.4 Geology	7
2.5 Hydrogeology	8
2.6 Watercourses and defences	8
3 Planning Policy and Flood Risk	9
3.1 Planning context	9
3.2 Development sites in flood zones	9
3.3 Sequential and exception tests	10
3.4 NPPF and PPG flood vulnerability and flood zone incompatibility	10
3.5 Climate change allowances	11
3.6 Policy review	13
4 Assessment of Flood Risk	16
4.1 Historic flooding	16
4.2 Fluvial flood risk	16
4.3 Surface water flood risk	17
4.4 Groundwater flood risk	19
4.5 Sewer flood risk	20
4.6 Reservoir flood risk	20
4.7 Nearby potential watercourses	20
5 Flood Mitigation Measures	21
5.1 Raising vulnerable infrastructure	21
5.2 Natural Flood Management Measures	21

5.3	Safe access and egress	21
6	Conclusions and Recommendations	22
6.1	Conclusion	22
6.2	Recommendations	22
A	Proposed development layout	XXIII
B	Environment Agency Correspondence	XXIV
C	Wiltshire Council Drainage Search	XXV

List of Figures

Figure 2-1: Site location plan	5
Figure 2-2: LiDAR Digital Terrain Model	7
Figure 2-3: Surrounding watercourses	8
Figure 4-1: EA Recorded Flood Outlines	16
Figure 4-2: Flood Map for Planning	17
Figure 4-3 Risk of Flooding from Surface Water Extent mapping	18
Figure 4-4 Risk of Flooding from Surface Water Flood Depth mapping	19

List of Tables

Table 2-1: Summary of site details	5
Table 3-1: Flood Zone classifications	9
Table 3-2: Flood risk vulnerability and flood zone 'incompatibility'	11
Table 3-3: Peak river flow allowances for the Avon Bristol and North Somerset	12
Table 3-4: Peak rainfall intensity allowances for the Avon Bristol and North Somerset Streams Management Catchment	12

Abbreviations

AEP.....	Annual Exceedance Probability
BGS.....	British Geological Survey
CFMP.....	Catchment Flood Management Plan
DTM	Digital Terrain Model
EA	Environment Agency
FRA.....	Flood Risk Assessment
LandIS.....	Land Information System
LiDAR.....	Light Detection And Ranging
NGR	National Grid Reference
NPPF.....	National Planning Policy Framework
OS.....	Ordnance Survey
OS NGR.....	Ordnance Survey National Grid Reference
PPG.....	Planning Policy Guidance
SFRA.....	Strategic Flood Risk Assessment

Executive Summary

Background and site context

- JBA Consulting were commissioned by Gridserve to undertake a Flood Risk Assessment (FRA) for the proposed Low Voltage (LV) Cabinets at an existing EV Charging Hub at Moto Leigh Delamere.
- There is Moorshall Brook approximately 20m east of the site to which a watercourse flows into along the south of the site.
- The LIDAR data indicates there is a slight slope up within both site boundaries. The topography ranges between approximately 102.42-102.72mAOD within the north site boundary and 102.15-102.25mAOD within the south site boundary.
- The British Geological Survey indicates that the site is underlain by Cornbrash Formation - Limestone bedrock including sedimentary rocks. Land IS Soilscape Viewer indicates the soil of the site is shallow lime-rich soils over chalk or limestone.
- The Flood Map for Planning mapping indicates that the site is within Flood Zone 1 and is an 'essential infrastructure', so an exception test is not required.
- The Risk of Flooding from Surface Water (RoFSW) maps were used to assess the risk of flooding from surface water overland flows. It is shown that the site is in low risk of flooding from surface water during the 0.1% Annual Exceedance Probability (AEP), also known as (aka) the 1 in 1000-year event.
- According to the SFRA Level 1, LFRMS and SWMP the surface water flood risk is significant within the county. The main sources of surface water flood risk derive from sewer, drainage issues and heavy rainfalls.
- The risk of groundwater flooding is considered very low because superficial deposits of Unproductive superficial aquifer. The maps also indicate that the site is underlain by a Secondary A bedrock aquifer.
- In the unlikely event of a reservoir breach, the site and surrounding areas are unaffected by the 'dry day' and 'wet day' scenarios. There is a 'very low' risk to reservoir flooding.

Recommendations

- It is recommended that the equipment of the proposed development is raised at least 150mm above ground level. This measure will ensure the proposed infrastructure is safe from flooding during surface water flood events (i.e. the main source of flooding to the site).
- Safe access and egress to and from the site is available during the 3.3% (High), 1% (Medium) and 0.1 (Low) AEP surface water flood event.

1 Introduction

1.1 Terms of reference

JBA Consulting were commissioned by Gridserve to undertake a Flood Risk Assessment (FRA) for the proposed Low Voltage (LV) Cabinets at an existing Electric Vehicle (EV) Charging Hub at Moto Leigh Delamere.

This FRA provides information on all aspects of flood risk pertaining to the site in accordance with the revised National Planning Policy Framework (NPPF) and associated Planning Practice Guidance (PPG) relating to development and flood risk. It also considers the flood risk mitigation relevant to the nature of the proposed development and the Flood Zone classification of the site.

The flood risk to and from the site has been determined from publicly available information and a review of the site topography.

1.2 FRA requirements

It is a requirement for development applications to consider the potential risk of flooding from various sources to a proposed development over its lifetime and any possible impacts on flood risk elsewhere as a result of the development.

Where appropriate, the following aspects of flood risk should be addressed and the extent to which the development is designed to deal with flood risk:

- the nature and expected lifetime of the development and the extent to which the development is designed to deal with flood risk;
- the area liable to flooding from various sources;
- the probability of the current and future flood risk;
- the extent and standard of existing flood defences and their effectiveness over time;
- the likely depth of flooding;
- the rates of predicted flows;
- the likelihood to impacts on other areas, properties, and habitats; and
- the effects of climate change.

The level of flood risk to the site has been determined based on open license flood risk datasets provided on the Defra Data Services website by the Environment Agency. This includes the Flood Map for Planning, LIDAR Digital Terrain Model (DTM) and flood history datasets.

2 Study Area

2.1 Existing site

The site is located at Moto Leigh Delamere (Westbound) off the M4 motorway in Leigh Delamere, SN14 6LB. Figure 2-1 below shows the location of the site. The proposed site is located approximately 20m to the west of an ordinary watercourse (presumably named the Moorshall Brook). The site has existing charging bays and equipment which includes cabinets, equipment, RMU, and transformers on the north and charging stations at the south of the site. There are also existing kerbs that are proposed to be reinstated within the site. The size of the site boundary is 0.14ha (more details in Table 2-1.).

Table 2-1: Summary of site details

Site Name	Moto Leigh Delamere
Site area	0.14
Existing site use	Retail Car Park
OS NGR	ST 89258 79018
County	Wiltshire
Country	England
Local Planning Authority	Wiltshire Council
Lead Local Flood Authority	Wiltshire Council

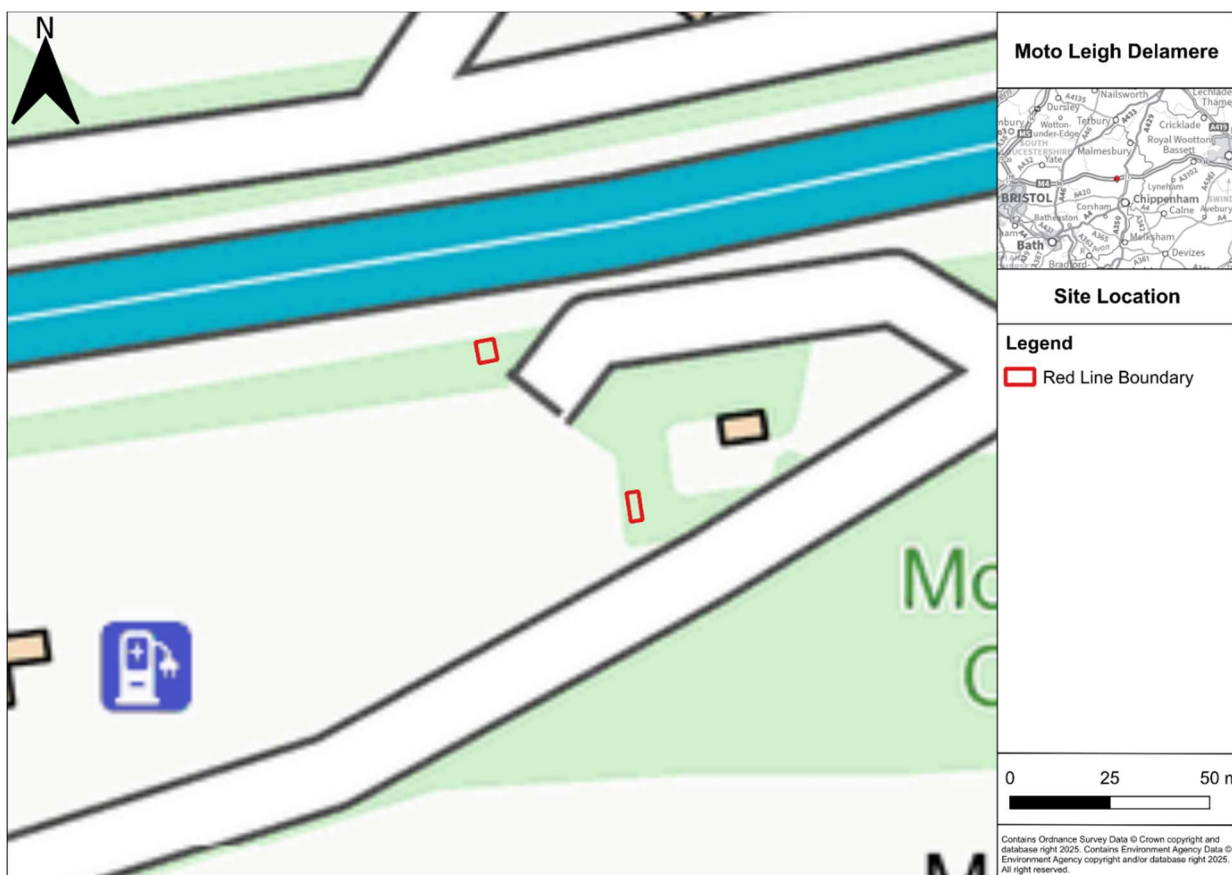


Figure 2-1: Location of site

2.2 Proposed development

The proposed development includes the installation of a new substation between the existing equipment at the north of the site and a new LV Feeder Pillar and SCADA cabinet on the east of the proposed charging and ancillary equipment. The existing kerb north of the proposed charging and ancillary equipment is planned to be reinstated.

The proposed development layout is shown in Appendix A.

2.3 Topography

The Environment Agency's (EA's) 2020 LiDAR DTM dataset has also been used to provide a topographical visualisation of the wider area and is shown in Figure 2-2. The site is slightly sloping up within both site boundaries from approximately 102.42-102.72mAOD within the north site boundary and 102.15-102.25mAOD within the south site boundary.

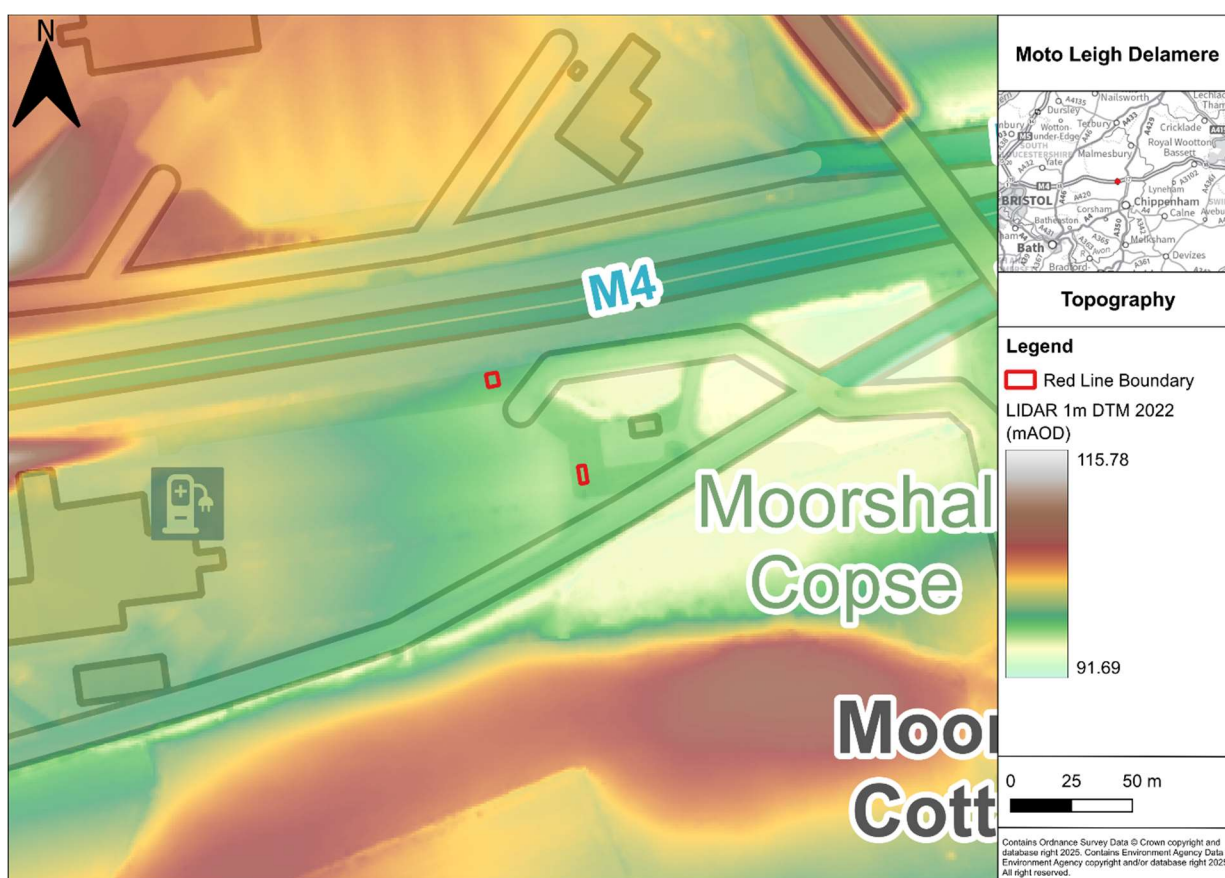


Figure 2-2: LiDAR Digital Terrain Model

2.4 Geology

British Geological Survey (BGS) data indicates that the site is underlain by Cornbrash Formation - Limestone bedrock including sedimentary rocks. BGS Borehole information records confirm that there is no groundwater present within close proximity of the site. Borehole ST87NE, located approximately 125 metres west of the site, and boreholes ST87NE25 and ST87NE26, situated around 135 metres to the east, report no groundwater encountered to a depth of 50 metres. According to LandIS Soilscales viewer, the soil of the site is 'shallow lime-rich soils over chalk or limestone'.

At the time of writing, no site-specific intrusive ground investigations have been made available to confirm the underlying geology.

2.5 Hydrogeology

Hydrogeological information was obtained from the online Magic Maps service. These maps indicate that the site is underlain by an Unproductive superficial aquifer. The maps also indicate that the site is underlain by a Secondary A bedrock aquifer.

The site is located within the Zone II - Subsurface Activity Groundwater Source Protection Zone (SPZ). High Soluble Rock Risk Groundwater Vulnerability map.

2.6 Watercourses and defences

EA and Ordnance Survey (OS) mapping have been used to identify the locations of watercourses within and around the development site.

The site is located near the presumably called Moorshall Brook which flows from west to east, to the east of the site and presumably along the northern and southern boundaries of the site.

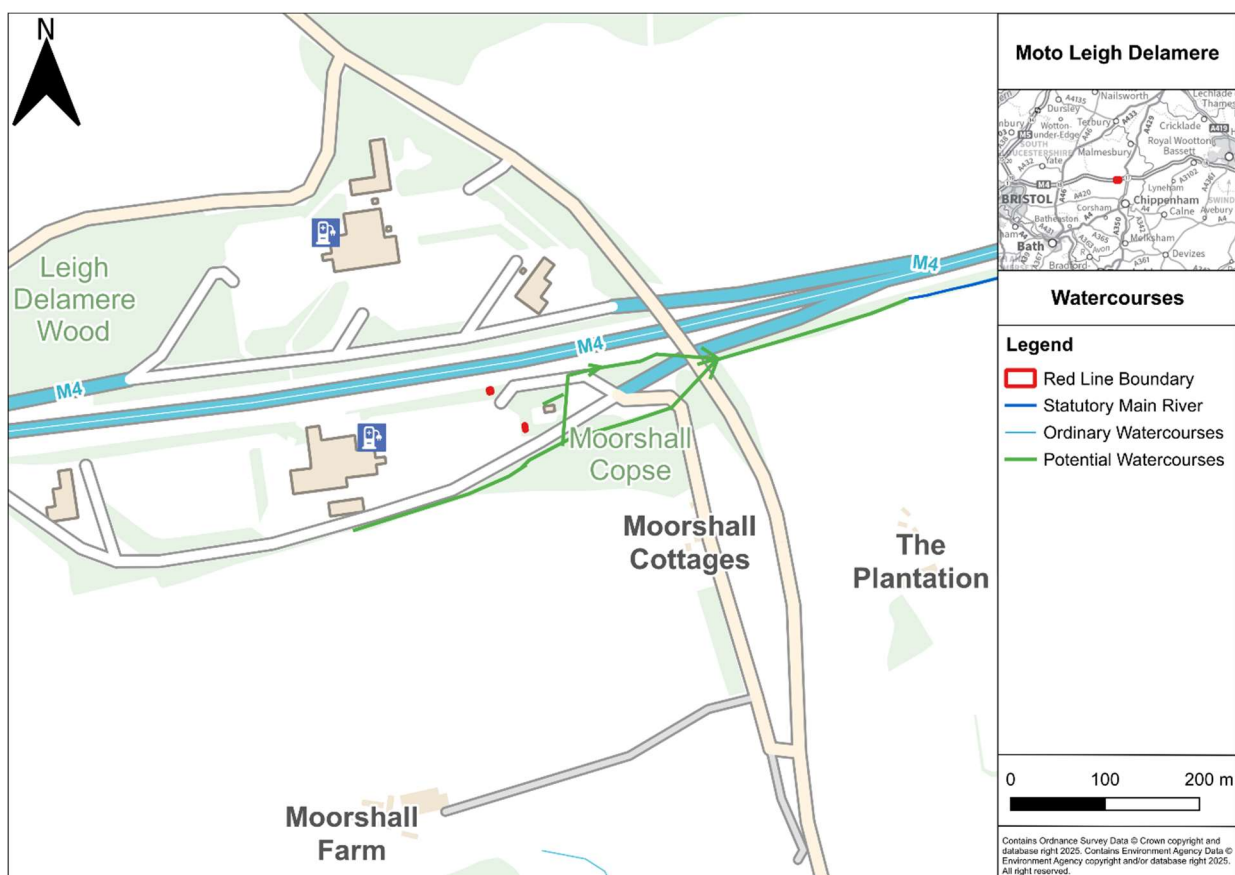


Figure 2-3: Surrounding watercourses

3 Planning Policy and Flood Risk

3.1 Planning context

The National Planning Policy Framework¹ (NPPF) was introduced by the Department for Communities and Local Government in March 2012 and last updated in December 2024. The revised NPPF considers flood risk to developments using a sequential characterisation of all sources of flood risk, based on planning zones and the EA Flood Map. The NPPF is supported by the Planning Practice Guidance² (PPG), originally published in March 2014 and most recently updated in August 2022, which gives additional information on the assessment of flood risk. The main study requirement is to identify the flood zones and vulnerability classification relevant to the proposed development, based on an assessment of current and future conditions.

3.2 Development sites in flood zones

The EA states that the flood risk is a function of:

- “The likelihood of a particular flood happening, best expressed as a chance or probability over a period of one year. For example, ‘There is a 1 in 100 chance of flooding in any given year in this location’.
- “The impact or consequences that will result if the flood occurs.”

The EA has developed a Flood Map which shows the risk of fluvial and tidal flooding in England for different return period events, assuming no flood defences. This map provides the basis for the assessment of flood risk and development suitability under the NPPF. This map is divided into flood zones which indicate the probability that land in each zone has of flooding from fluvial or tidal sources, as outlined in Table 3-1.

Table 3-1: Flood Zone classifications

Flood Zone	Definition
Zone 1: Low Probability	Land assessed as having a less than 1 in 1000 annual probability of river or sea flooding in any year (<0.1% AEP).
Zone 2: Medium Probability	Land assessed as having between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% – 0.1% AEP) or between a 1 in 200 and 1 in 1000 annual probability of sea flooding (0.5% – 0.1% AEP) in any year.
Zone 3a: High Probability	Land assessed as having a 1 in 100 or greater probability of river flooding (>1% AEP) or a 1 in

¹ National Planning Policy Framework:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf
² Planning Practice Guidance: <https://www.gov.uk/government/collections/planning-practice-guidance>

Flood Zone	Definition
	200 or greater annual probability of flooding from the sea (>0.5% AEP) in any year.
Zone 3b: Functional Floodplain	This zone comprises land where water from rivers or the sea has to flow or be stored in times of flood. The identification of functional floodplain should take account of local circumstances and not be defined solely on rigid probability parameters. Functional floodplain will normally comprise: • land having a 3.3% or greater annual probability of flooding, with any existing flood risk management infrastructure operating effectively; or • land that is designed to flood (such as a flood attenuation scheme), even if it would only flood in more extreme events (such as 0.1% annual probability of flooding). Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency.

3.3 Sequential and exception tests

The NPPF requires that the Sequential and Exception Tests be applied when choosing the location of new development and the layout of the development site. The Sequential Test aims to promote development in low flood risk areas considering all sources of flooding. The Exception Test is used where no suitable development areas can be found in low-risk zones.

The Sequential Test should be applied to identify suitable sites which are at low risk from all sources of flooding, avoiding medium and high-risk areas where possible. If no suitable areas can be identified in low-risk areas, then sites with the lowest flood risk should be considered next. If development is necessary within a medium or high-risk zone, an exception test may be required to demonstrate the need for the development in that location and plans to mitigate the flood risk. The requirement for the application of the Exception Test is outlined in Section 3.4 below.

3.4 NPPF and PPG flood vulnerability and flood zone incompatibility

Table 3-1 shows how Flood Zones are defined (as based on Table 1 of the PPG). Annex 3 of the NPPF shows the classification of flood risk vulnerability in relation to a

proposed development type. Table 3-2 of NPPF3 (reproduced from Table 2 of the PPG) shows the compatibility of these flood zones and vulnerability classifications.

The proposed development will consist of car parking areas within the site which is considered as commercial development. This is classified as 'essential infrastructure' under the NPPF. Table 3-2 shows that under the Flood Zone categories, proposed developments that are 'less vulnerable', an Exception Test is now required.

Table 3-2: Flood risk vulnerability and flood zone 'incompatibility'

Flood Zone	Essential Infrastructure	Highly Vulnerable	More Vulnerable	Less Vulnerable	Water Compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test Required	✓	✓	✓
Zone 3a	Exception Test Required	X	Exception Test Required	✓	✓
Zone 3b	Exception Test Required	X	X	X	✓
Notes: ✓ Exception Test is not required X Development should not be permitted.					

3.5 Climate change allowances

The NPPF and supporting PPG on Flood Risk and Coastal Change explain when and how flood risk assessments should be used. This includes demonstrating how flood risk will be managed now and over the development's lifetime, taking climate change into account.

On 19 February 2016, the EA released new guidance on climate change allowances to support the NPPF. The guidance was last updated on 12 December 2024. The climate changes allowances are predictions of anticipated changes for the following:

- peak river flow allowances for each river basin district;
- peak rainfall intensity;
- sea level rise; and
- offshore wind speed and extreme wave height.

3 <https://www.gov.uk/guidance/national-planning-policy-framework/annex-3-flood-risk-vulnerability-classification>

3.5.1 Peak river flows

The guidance provides advice on which peak river flow allowances, based on management catchments, should be used for FRAs for sites in all Flood Zones.

As the proposed development is for a commercial use, the lifetime of the development is considered to be 100 years and therefore the higher central climate change allowance for the 2080s epoch (2070– 2115) has been considered.

In the Avon Bristol and North Somerset Streams Management Catchment, this equates to an allowance of +38%, as shown in Table 3-3. The 1 in 100-year event plus climate change is also known as the design flood.

Table 3-3: Peak river flow allowances for the Avon Bristol and North Somerset Streams Management Catchment

Allowance	Total anticipated for the 2020s (2015-2039)	Total potential change anticipated for the 2050s (2040-2069)	Total potential change anticipated for the 2080s (2070-2115)
Central	10%	12%	26%
Higher central	15%	19%	38%
Upper end	26%	39%	71%

3.5.2 Peak rainfall intensity

The guidance also provides advice on which peak rainfall intensity allowances, based on management catchments, should be used. Development with a lifetime beyond 2070 should use the upper end allowances. In the Avon Bristol and North Somerset Streams Management Catchment, this equates to an allowance of +35% for the 3.3% AEP event and +40% for the 1% AEP event.

Table 3-4: Peak rainfall intensity allowances for the Avon Bristol and North Somerset Streams Management Catchment

AEP	Epoch	Central Allowance	Upper End Allowance
3.3%	2050s (2023-2060)	20%	35%
3.3%	2070s (2061-2125)	25%	35%
1%	2050s (2023-2060)	20%	40%
1%	2070s (2061-2125)	25%	40%
Note: In some locations the allowance for the 2050s epoch is higher than that for the 2070s epoch. If so, and development has a lifetime beyond 2061, use the higher of the two allowances.			

3.6 Policy review

3.6.1 Wiltshire Local Plan

Wiltshire Council's current Local Plan is the Wiltshire Core Strategy (WCS)⁴ adopted in January 2015. It involves policies from former District Local Plans. The Council's latest Local Plan Pre-Submission Draft 2020-2038⁵ adopted in July 2023, involves key challenges, visions and objectives for Wiltshire County. The Local Plan Review does not revisit objectives from the WCS but it includes updated and new policies for planning applications. The Local Plan includes the Core Policy 67 (CP67) which aims to ensure that any new development does not increase flood risk elsewhere to people and properties. The CP67 highlights a sequential approach for new developments and reduction and avoidance of increasing flood risks by improving existing flows or drainage paths.

The Core Strategy supports a sustainable approach for surface water drainage. Furthermore, it expects for any development planning to consider green infrastructure and to incorporate Sustainable Drainage Systems (SuDS) by for example, using rain harvesting, permeable paving and swales. Proposed developments that are located within Flood Zone 2 and 3 are required to reduce surface water run-off and to improve surface water infiltration to soil and ground.

⁴ https://www.wiltshire.gov.uk/media/372/Wiltshire-Core-Strategy-adopted-2015/pdf/Wiltshire_Core_Strategy_2015.pdf?m=1735555642237

⁵ Local Plan Review Pre-Submission Review 2023

3.6.2 Wiltshire Council Strategic Flood Risk Assessment

Wiltshire Council Strategic Flood Risk Assessment Level 1 (SFRA)⁶ published in November 2024. The SFRA key objectives on flood risks for developments are to reduce and manage flood risks such as surface water, fluvial, sewer or groundwater flooding. The Level 1 SFRA includes data of historic flooding and the source of the flooding. It helps for developers to understand the risks from flooding from all the abovementioned sources. It highlights the importance of mitigations and proper planning before any development works take place on site. The SFRA helps developers to apply the Sequential Test and necessity of an Exception Test for the proposed development site.

3.6.3 Wiltshire Council Local Flood Risk Management Strategy

Wiltshire Council Local Flood Risk Management Strategy⁷ (LFRMS) published in October 2016 highlights the importance of improving knowledge of flood risks such as surface water, fluvial or groundwater flooding. The LFRMS ensures for developers to protect infrastructure and development from flood risks, to improve the resilience to flooding and meanwhile minimise impact on the environment and avoid the increase of flooding elsewhere around the development.

3.6.4 Wiltshire EV Infrastructure Strategy and Local Transport Plan 4

The Wiltshire EV Infrastructure (EVI) Strategy (2012-2024)⁸ published in October 2021 and an updated draft report for 2025 to 2028 embedded with the Local Transport Plan 4 (LTP4)⁹ highlights the importance on battling climate change by encouraging the use of more electric vehicles in the future. The Council has acknowledged climate crisis in the EVI Strategy and ensures to focus on becoming an organisation of carbon neutral by 2030. Therefore, the Council supports new developments for electric car charging stations to broaden the use and reliability of electric vehicles in the future. The Strategy addresses current climate change challenges and aims to set a foundation for future delivery. The first plan was for the period of 2021 to 2024 and now there is an updated draft report for the period of 2025 to 2028. The updated draft report will continue to focus on a sustainable and environment friendly solution for the

6 https://www.wiltshire.gov.uk/media/14497/SD67-Wiltshire-Level-1-Strategic-Flood-Risk-Assessment-2024/pdf/SD67_Wiltshire_Level_1_Strategic_Flood_Risk_Assessment_2024.pdf?m=1733141632550

7 WILTSHIRE COUNTY COUNCIL

<https://cms.wiltshire.gov.uk/documents/s124647/Wiltshire%20Local%20Flood%20Risk%20Management%20Strategy.pdf>

8 <https://cms.wiltshire.gov.uk/documents/s194841/Appendix%20for%20Electric%20Vehicle%20Charging%20Strategy.pdf>

9 LTP4 Strategic transport sub-strategy

County, to support developments for EV charging stations and to build future-ready infrastructure for electric vehicle charging.

3.6.5 Wiltshire Council Surface Water Management Plan

Wiltshire Council Surface Water Management Plan¹⁰ (SWMP) Phase I & II published in November 2021. The SWMP considers all sources of surface flooding for the county, for example flooding from sewers, groundwater, drains, run-off, ditches and small ordinary watercourses that could flood after heavy rainfall events. The key objectives of the SWMP are to assess and identify flood risks, to develop sustainable approaches for example SuDS and to improve resilience against flooding. The SWMP highlights that there were several historical records of flooding from surface water, sewer/drainage systems and groundwater sources in the past. Therefore, it is required by the Council that development plannings are addressing these issues of surface water flooding by properly managing flood risks for the present and for the future, and to maximise strategic improvements such as SuDS retrofit and drainage systems.

¹⁰ <https://www.wiltshire.gov.uk/media/8840/Wiltshire-surface-water-management-plan-phase-1-and-2-report/pdf/planningpolicy-wiltshire-swmp-phase-1-and-2-report.pdf?m=1646066271407>

4 Assessment of Flood Risk

4.1 Historic flooding

The EA historic flood events mapping and the Wiltshire Council Recorded flood events mappings were used to identify historic flood events near the site. There are no historic flood events recorded at or in close proximity of the site. The nearest recorded flood events were in New Priory Stud Farm, approximately 850m south of the site, and Station Lane approx. 1200m southeast of the site (Figure 4-1).

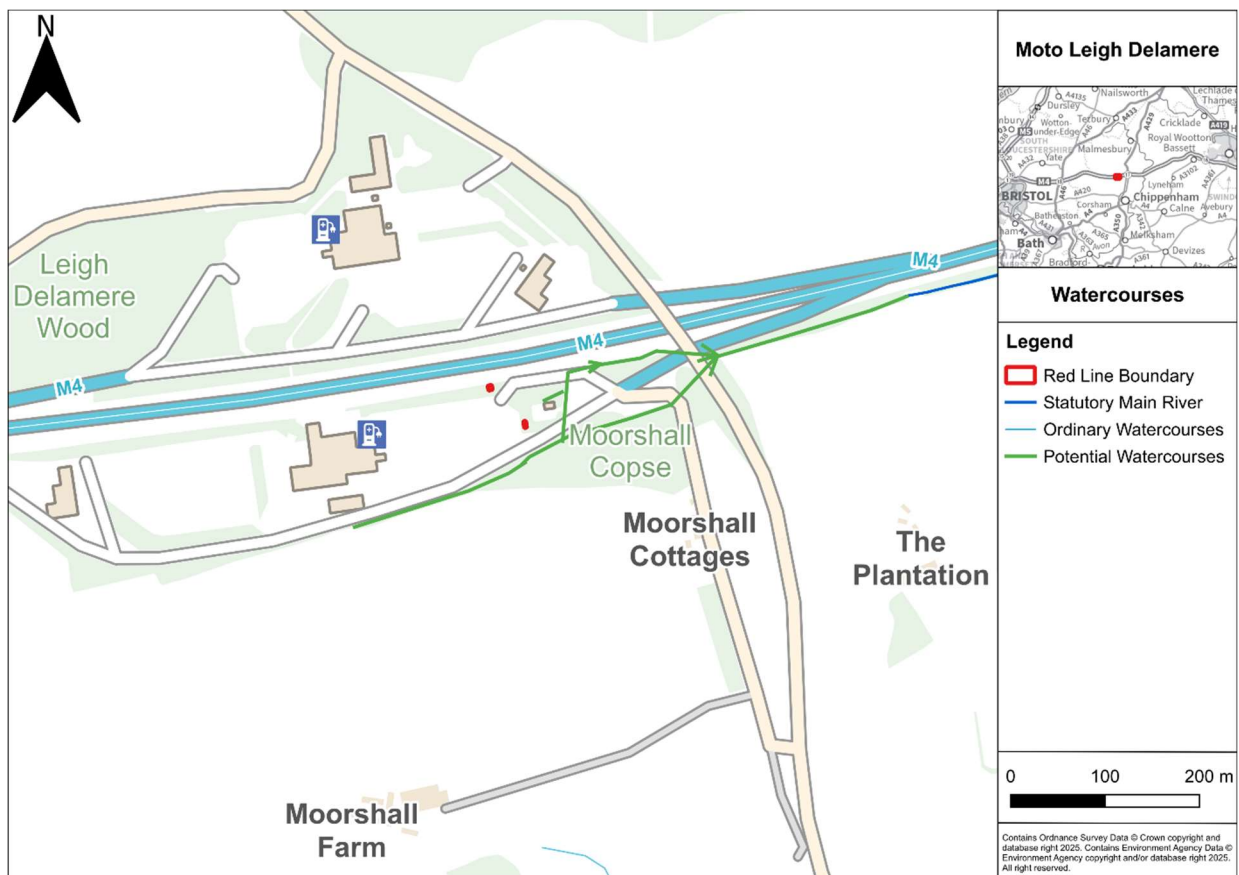


Figure 4-1: EA Recorded Flood Outlines

4.2 Fluvial flood risk

4.2.1 Flood Map for Planning

The EA Flood Map for Planning has been reviewed to assess risk of flooding from fluvial sources. This indicates that the site is not within the 3.3%, 1% or 0.1% AEP flood events and thus is located within Flood Zone 1. Figure 4-2 shows that the site is not at risk of fluvial flooding.

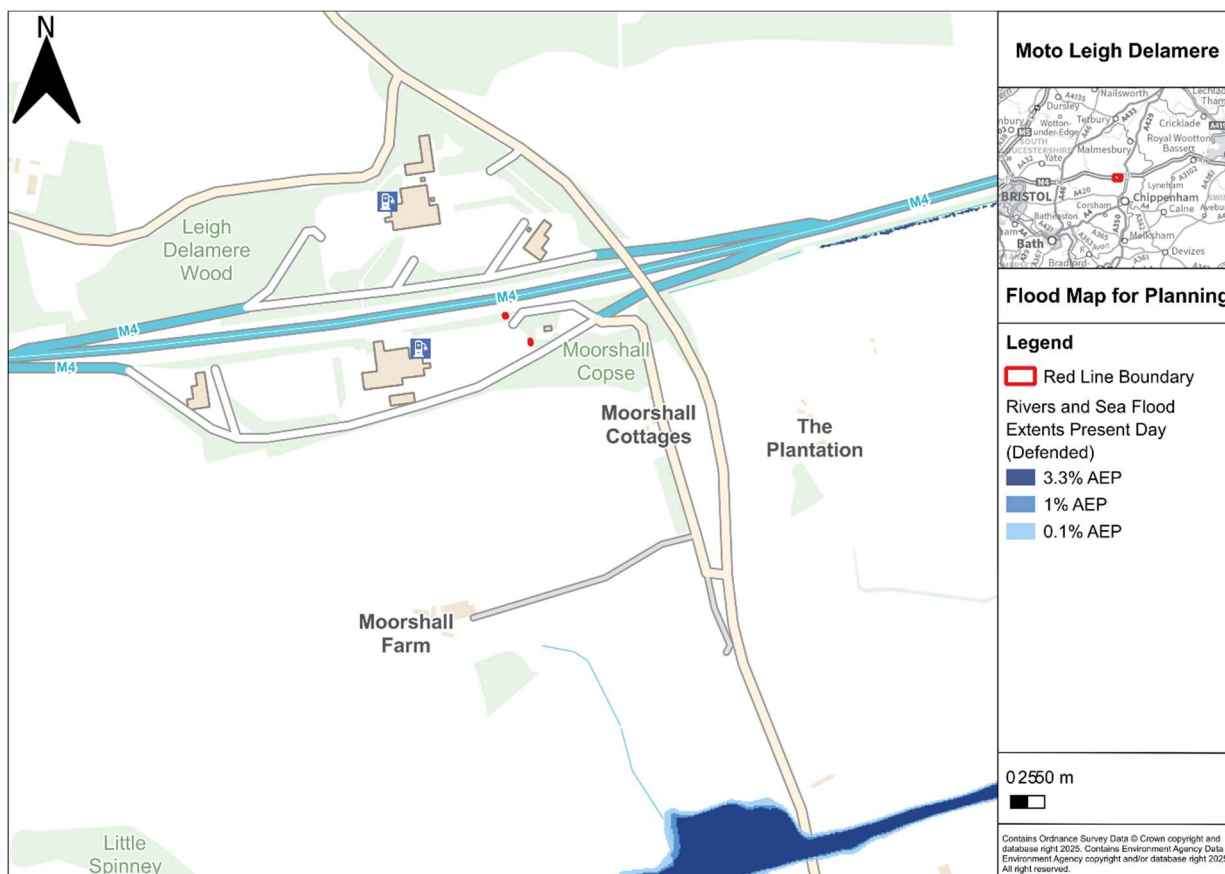


Figure 4-2: Flood Map for Planning

4.3 Surface water flood risk

Surface water flooding arises when rain falling on saturated ground flows overland, following the local topography. Overland flow can pose a risk to both the development site and land surrounding the development site. In the former case, overland flow may originate from the site itself or from adjoining land at a higher elevation from which flow migrates onto the development area. In the latter case, existing developments at a lower elevation may be subject to flooding due to overland flow originating from the site and migrating towards lower areas. The layout of the proposed development needs to reflect and, where necessary, mitigate against the risks.

Figure 4-3 shows the extents of surface water flood risk to the site for the 1 in 30 (3.3% AEP - High), 1 in 100 year (1% AEP - Medium) and 1 in 1000 year (0.1% AEP - Low) events. The mapping indicates that the surface water flood risk to the site is low and only affects the north of the site.

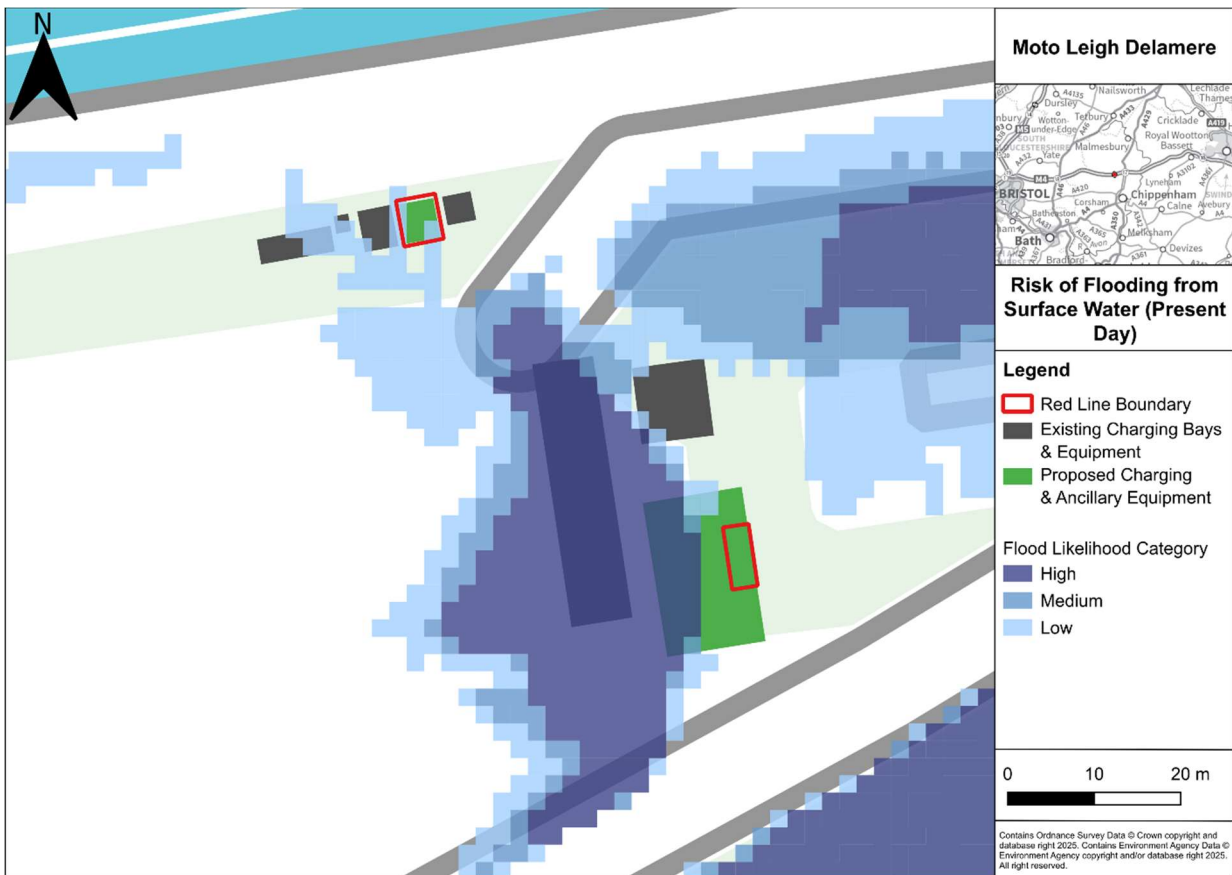


Figure 4-3 Risk of Flooding from Surface Water Extent mapping

The SWMP, LFRMS and SFRA L1 considers surface water flooding as significant within the county, however, it is low within the site boundary. The main sources for surface water flooding are sewer flooding, run-off and groundwater flooding significantly after a heavy rainfall event.

Figure 4-4 below illustrates the depth of surface water flooding at the site. The flood depth is a maximum of 300mm across all the three return periods. For the purposes of this assessment, the 1000-year design event was used as a proxy to the 100-year with climate change 'design' flood event to assess surface water flood depths at the site. During this event, the site is not affected by surface water flood risk.

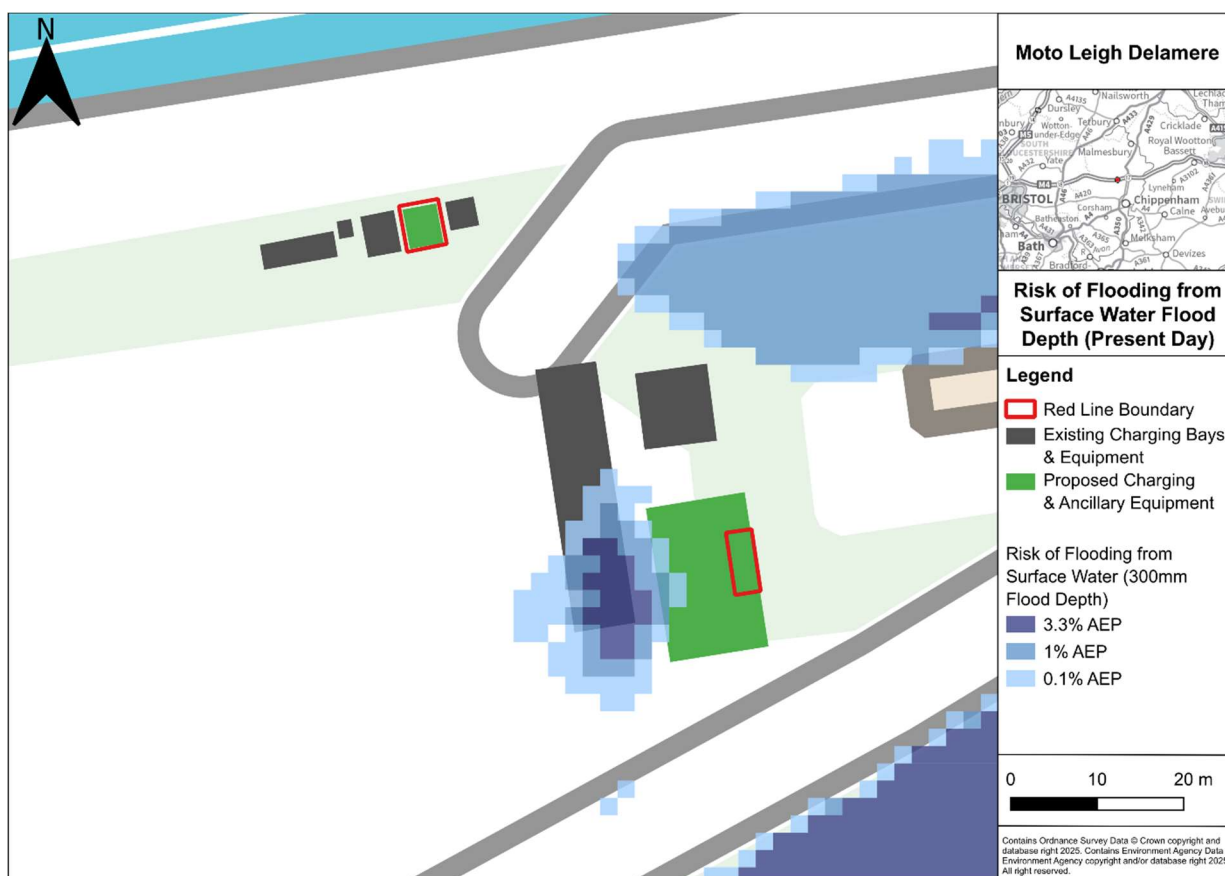


Figure 4-4 Risk of Flooding from Surface Water Flood Depth mapping

4.4 Groundwater flood risk

Groundwater flooding occurs when the water table rises above ground level, particularly after prolonged rainfall events. This is most likely to occur in low-lying areas that are underlain by permeable bedrock and superficial geologies. Unlike other forms of flooding, groundwater flooding does not pose a significant risk to life but can cause serious damage to property.

The SWMP, LFRMS and SFRA L1 considers groundwater flooding as one of the main sources for surface water flooding in the county.

Given the proximity of the site to Moorshall Brook, the potential watercourses and the presence of underlying aquifers, it is likely that relatively shallow groundwater is present beneath the site. However, borehole data (Section 2.4) indicates that no groundwater was encountered to a depth of 50 metres. Consequently, the overall groundwater risk is assessed as low to very low.

4.5 Sewer flood risk

Sewer flooding can occur when drainage systems become overwhelmed by heavy rainfall or when pipes become blocked.

The SWMP and SFRA L1 considers sewer flooding as a source of flooding in the area which is mainly caused by surface water run-off after heavy rainfall and blocked drains.

Wiltshire Council Highways have a surface water system comprising of a series of gullies along the adjacent highway, as indicated by the response from it's drainage team within Appendix C. The M4 is assumed to have its own surface water system owned and maintained by Highways England. The Leigh Delamere service station carpark is assumed to have its own private surface water drainage system with existing drainage identified on the site layout in Appendix A.

The site is not located within a suburban area and is surrounded by greenfield land. Therefore, it is considered likely that the only onsite sewers are those that serve the site directly. Consequently, the risk of sewer flooding is assessed as low.

4.6 Reservoir flood risk

The EA's Risk of Flooding from Reservoirs Map shows where water may go in the unlikely event of reservoir or dam failure. The mapping shows two flooding scenarios, a 'dry day' scenario that estimates the flood extents (assuming that the failure occurred when rivers were at normal levels) and a 'wet day' scenario that predicts the flood extents if a river were already experiencing flooding.

There is no risk of reservoir flooding to the site.

4.7 Nearby potential watercourses

It is presumed that there are watercourses along the southern boundary of the site, which connects to Moorshall Brook to the east of the site. The watercourse (Figure 2-3 above) flows from west to east and flows through the culvert under the crossing bridge over the M4 motorway. As the LiDAR data shows low-lying continuous land along the south of the site, it is likely that the watercourse is present there. This may be subject to surface water flooding by flood water run-off to the area.

5 Flood Mitigation Measures

5.1 Raising vulnerable infrastructure

The proposed development includes a new substation located to the north, along with a new LV feeder pillar and SCADA cabinet to the east of the planned charging and ancillary equipment. In accordance with Annex 3 of the National Planning Policy Framework (NPPF), the substation and associated electrical infrastructure—such as inverters—are classified as 'essential infrastructure'.

According to the Flood Map for Planning, the site does not lie within any designated flood zones. However, there is a low risk of surface water flooding identified at the northern part of the site. The Risk of Flooding from Surface Water (RoFSW) mapping provides the most reliable data for assessing this risk.

To mitigate potential flood impacts, it is considered proportionate to insulate and elevate all substation electrical wiring to at least 150mm high. While the maximum estimated flood depth in the southern site parcel is 300mm, additional precautions are necessary to address uncertainties, minimise health and safety risks, and protect infrastructure during potential pluvial flood events.

5.2 Safe access and egress

Safe access and egress routes are along the side road of the M4 Motorway towards the west. This side road has low risk of surface water flooding.

6 Conclusions and Recommendations

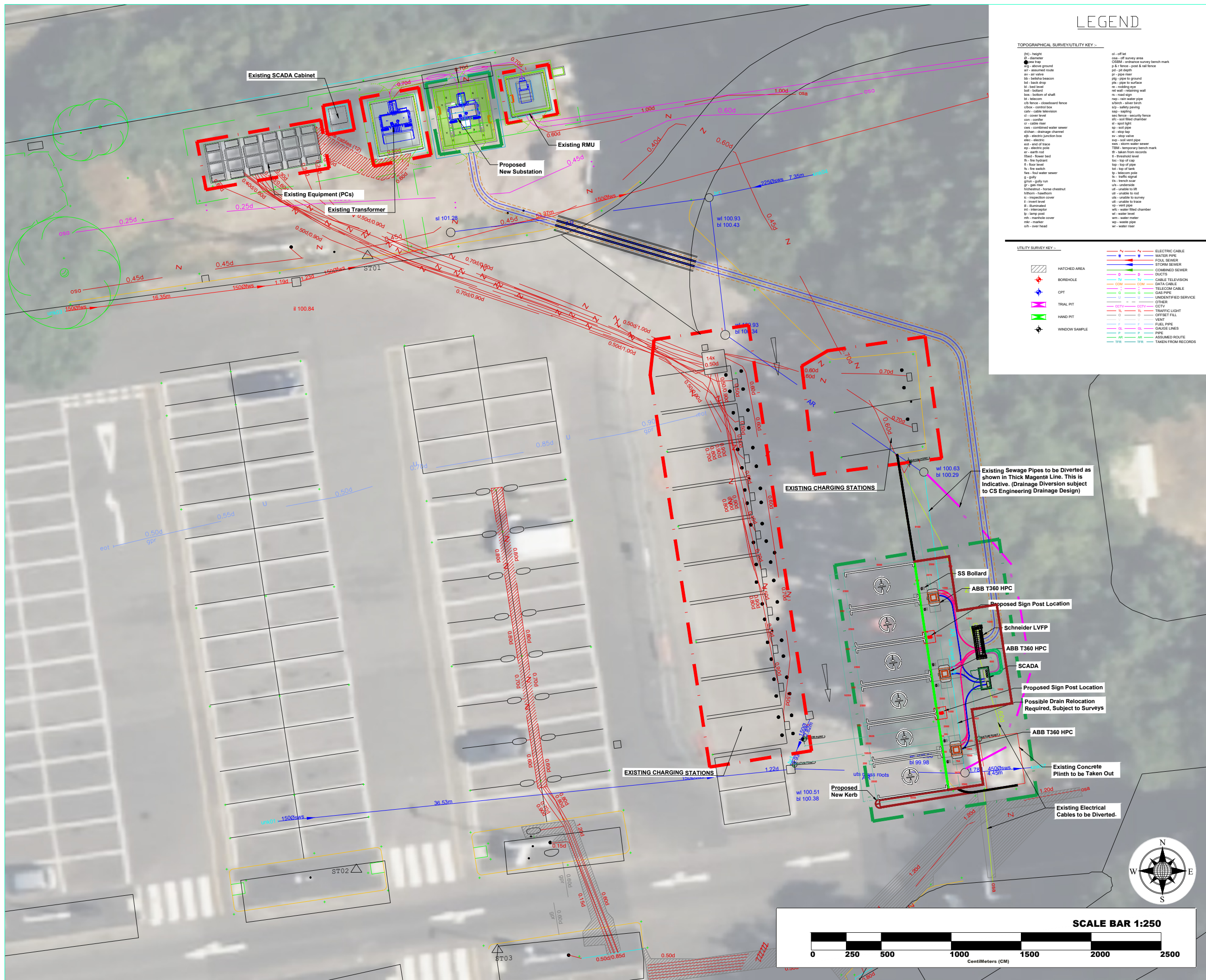
6.1 Conclusion

- JBA Consulting were commissioned by Gridserve to undertake a Flood Risk Assessment (FRA) for the proposed Low Voltage (LV) Cabinets at an existing EV Charging Hub at Moto Leigh Delamere.
- Moorshall Brook is located approximately 20m east of the site to which a watercourse flows along the south of the site.
- The LIDAR data indicates there is a slight slope up within both site boundaries. The topography ranges between approximately 102.42-102.72mAOD within the north site boundary and 102.15-102.25mAOD within the south site boundary.
- The British Geological Survey indicates that the site is underlain by Cornbrash Formation - Limestone bedrock including sedimentary rocks. Land IS Soilsmap Viewer indicates the soil in the site is shallow lime-rich soils over chalk or limestone.
- The Flood Map for Planning mapping indicates that the site is within Flood Zone 1 and is 'essential infrastructure', so an exception test is not required.
- The Risk of Flooding from Surface Water (RoFSW) maps were used to assess the risk of flooding from surface water overland flows. It is shown that the site is at low risk of flooding from surface water during the 0.1% AEP (1 in 1000-year) event.
- According to the SFRA Level 1, LFRMS and SWMP the surface water flood risk is significant within the county. The main sources of surface water flood risk derive from sewer, drainage issues and heavy rainfall.
- The risk of groundwater flooding is considered very low because superficial deposits of Unproductive superficial aquifer are present. The maps also indicate that the site is underlain by a Secondary A bedrock aquifer.
- In the unlikely event of a reservoir breach, the site and surrounding areas are unaffected by the 'dry day' and 'wet day' scenarios. There is a 'very low' risk to reservoir flooding.

6.2 Recommendations

- It is recommended that the equipment of the proposed development is raised at least 150mm above ground level. These measures are proportionate to the flood risk and will help protect infrastructure and ensure safety during flood events.
- Safe access and egress to and from the site is available during the 3.3% AEP (High) surface water flood event.

A Proposed development layout



DO NOT SCALE

IF THERE SHOULD BE ANY DOUBT OR QUERY REGARDING THE INTERPRETATION OF THE INFORMATION GIVEN ON THIS DRAWING, PLEASE ENQUIRE DIRECTLY TO ACTEMIUM BEFORE EXECUTING SUCH PART OF THE WORK.

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NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL THE RELEVANT CONTRACT DOCUMENTATION.
- ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
- ALL SERVICES ARE NEW UNLESS OTHERWISE STATED.

KEY

GRIDSERVE PROPOSED CHARGING & ANCILLARY EQUIPMENT

GRIDSERVE EXISTING CHARGING BAYS & EQUIPMENT

INSTALL NEW HALF BATTER KERB WITH 100mm UPSTAND

EXISTING KERBS TO BE REINSTATED

INSTALL NEW SQUARE CHANNEL CURB

NOTE:

DRAWING IS CONCEPTUAL AND SUBJECT TO THE FOLLOWING:

- HV EARTHING STUDY
- HV DESIGN
- DNO / IDNO APPROVAL
- GPRS AND TOPO SURVEY
- DRAINAGE DESIGN
- ARBORICULTURE SURVEY

D	03/06/25	Fourth Issue	AD	JG
C	12/05/25	Third Issue	RCB	JG
B	01/05/25	Second Issue	VK	JG
A	30/04/25	First Issue	VK	JG
REV	DATE	DESCRIPTION	DRN	CHK

ACTEMIUM | EV

Solutions & Services for Industry

Unit F Quinn Close, Whitley
Coventry CV3 4LH

Tel: +44 2476 51 6060

CLIENT:

GRIDSERVE

PROJECT:

GRIDSERVE
DESTINATION CHARGING

DRAWING TITLE

LEIGH DELAMERE WEST P3
FEASIBILITY SITE LAYOUT

DRAWN BY:	DATE:	SCALE:
AD	03/06/25	1:250
CHECKED BY:	DATE:	SHEET:
JG	03/06/25	A3
DRAWING STATUS:		REVISION:
FEASIBILITY		D
DRAWING NUMBER:		
003 84997.1.47 F01		

B Environment Agency Correspondence

Olivier Saillofest
J B A Consulting
Olivier.Saillofest@jbaconsulting.com

Our ref: EIR2025/15524
Date: 9th July 2025

Dear Olivier Saillofest,

Thank you for your enquiry which was received on 24th June 2025. We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004.

Abstract

Name	Product 4
Description	Detailed Flood Risk Assessment Map for Junction 17 And 18, M4 Westbound, Chippenham, SN14 6LB NGR: ST8919979021
Licence	Open Government Licence
Information Warnings	<i>The mapping of features provided as a background in this product is © Ordnance Survey. It is provided to give context to this product. The Open Government Licence does not apply.</i>
Attribution	Contains Environment Agency information © Environment Agency and/or database rights. Contains Ordnance Survey data © Crown copyright 2025 Ordnance Survey AC0000807064.

Open Data

Environment Agency published datasets are available on the weblink below as part of the Government's 'Open Data' project and are available for you to download free of charge.

Environment Agency published datasets: [Find open data - data.gov.uk](#)

Examples of datasets you may require:

- Flood Map for Planning
- Recorded Flood Outlines
- Historic Flood Map
- Surface Water for Spatial Planning extents

You can also access the Flood Map for Planning here: <https://flood-map-for-planning.service.gov.uk/>

You can also access the Risk of Flooding from Surface Water maps and Risk of Flooding from Reservoirs information here: <https://check-long-term-flood-risk.service.gov.uk/>

If you have requested this information to help inform a development proposal, then you should also note the detail in the attached advisory text on the use of Environment Agency Information and Further Guidance for FRAs.

Recorded Historic Flood Events

We no longer produce pdf copies of the Historic Flood Map. This information is available to search select, and download free of charge as part of the Government's 'Open Data' project as

- Recorded Flood Outlines
- Historic Flood Map

These are GIS layers and can be downloaded from: [Environment Agency - Publishers - data.gov.uk](https://data.gov.uk)

Please note: we cannot guarantee that this is an exhaustive list of all past flood events in this location. All reasonable care has been taken to ensure that the historical flood event data is as accurate as possible. The Environment Agency will update it's records if new evidence emerges.

Strategic Flood Risk Assessment (SFRA)

When preparing a FRA to support a development proposal in this location you should refer to Wiltshire Council's SFRA Reports Level 1 which is available to download via the following link: https://www.wiltshire.gov.uk/media/14497/SD67-Wiltshire-Level-1-Strategic-Flood-Risk-Assessment-2024/pdf/SD67_Wiltshire_Level_1_Strategic_Flood_Risk_Assessment_2024.pdf?m=1733141632550

The Wiltshire Council Local Plan is available via this link: <https://www.wiltshire.gov.uk/planning-policy-local-plan-review-consultation>. Please contact Wiltshire Council for further information about their latest SFRA.

Planning Advice

We now charge for aspects of discretionary planning advice including pre-application enquiries. This approach provides advice to developers in two ways. Firstly, there is the provision of 'free' high level advice available to everyone where we give a preliminary opinion on a proposed development. This sets out the environmental constraints together with any issues this raises for us. Should you wish us to obtain more detailed advice, we may be able to provide this through our discretionary chargeable scheme aimed at recovering our costs. If you have questions regarding elements of your enquiry related to Planning and Development, please contact our Sustainable Places team on wx.sp@environment-agency.gov.uk.

Flood Levels and Updates to National Modelling

Please note that the flood zones were updated on 25th March 2025 on our Flood Map for Planning service. The Flood Map for Planning shows the updated flood zones 1, 2 and 3 from March 2025, however the flood levels or depth data is not currently available for all of

the locations identified as at risk. You may wish to contact our Sustainable Places team at wx.sp@environment-agency.gov.uk to set up a chargeable agreement to discuss your planning proposal further with our local flood risk team. Alternatively, you could contact us again at a later date when we might be in a position to provide flood depth associated with our New National Flood Risk Assessment system.

If you intend to undertake a FRA for a planning application, please refer to the current planning guidance on 'Flood risk assessments: climate change allowances'. The relevant guidance is available at the following website address: <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>. Please be aware that this information is subject to change, please check the guidance regularly. Our Sustainable places team would be happy to discuss the issues around Climate Change and how this should be used.

Environmental Permit for Flood Risk Activities

In addition to any other permission(s) that you may have already obtained e.g. planning permission, you may need an environmental permit for flood risk activities (formerly known as Flood Defence Consent prior to 06 April 2016) if you want to do work:

- in, under, over or near a main river (including where the river is in a culvert)
- on or near a flood defence on a main river
- in the flood plain of a main river
- on or near a sea defence

For further information and to check whether a permit is required please visit: <https://www.gov.uk/guidance/flood-risk-activities-environmental-permits>.

For any further advice, please email Blandford.frap@environment-agency.gov.uk.

Flood Defences

If there are any formal flood defences within 1km of the site boundary provided, a PDF containing flood defence information will be enclosed. This information has been taken from our Asset Information Management System database (AIMS). A data download can be accessed here: [AIMS Asset Bundle](#)

Please note that flood defences can increase water levels elsewhere e.g. through channels being restricted by defences, or because defences prevent flood water flowing back into the river channel.

Further Information

We advise that you also contact Wiltshire Council by email: drainage@wiltshire.gov.uk or by phone: 0300 456 0105, based at: Bythesea Road, Trowbridge, Wiltshire, BA14 8JN as they may be able to provide further advice with respect to localised flooding and drainage issues.

Further details about the Environment Agency information supplied can be found on our website:

<https://www.gov.uk/browse/environment-countryside/flooding-extreme-weather>

If you have requested this information to help inform a development proposal, then you should note the information on GOV.UK on the use of Environment Agency Information for FRAs:

<https://www.gov.uk/planning-applications-assessing-flood-risk>

<https://www.gov.uk/government/publications/pre-planning-application-enquiry-form-preliminary-opinion>

We hope you find this information helpful. It is provided subject to the guidance below, which we strongly recommend you read.

Yours sincerely

Katy Barnes

Customer & Engagement, Wessex
Rivers House, East Quay, Bridgwater, Somerset, TA6 4YS
Email: wessexenquiries@environment-agency.gov.uk

Enc: Use of Environment Agency Information for Flood Risk Assessments (below)

Use of Environment Agency Information for Flood Risk Assessments (FRAs)

Important

Use of Environment Agency data: you should note that

1. Information supplied by the Environment Agency may be used to assist in producing a Flood Risk Assessment (FRA) where one is required, but the use of Environment Agency information does not constitute such an assessment on its own.
2. As part of your data request, we have provided all of the modelled data we hold for your location. Please note that some of our modelled information may have been produced for purposes other than for flood zone generation. This may mean that some of the modelled data you have been provided with has a lower confidence level, and has not been used in producing our flood map, nor definitively reflects the predicted flood water level at the property/development site scale. To check the suitability of the use of this information in your FRA please contact your local Partnership & Strategic Overview (PSO) team.
3. This information covers flood risk from main rivers and the sea, and you will need to consider other potential sources of flooding, such as groundwater or surface water runoff. The information produced by the Local Planning Authority and the Lead Local Flood Authority (LLFA) may assist in assessing other sources of flood risk.
4. Where a planning application requires a FRA and this is not submitted or deficient, the Environment Agency may well raise an objection.
5. For more significant proposals in higher flood risk areas, we would be pleased to discuss details with you ahead of making any planning application, and you should also discuss the matter with your Local Planning Authority.

Pre-Planning Advice from the Environment Agency

If you have requested this information to help inform a development proposal, then we recommend that you undertake a formal pre-application enquiry using the form available from our website:

Pre-application Preliminary Opinion:

<https://www.gov.uk/government/publications/pre-planning-application-enquiry-form-preliminary-opinion>

Pre-application Charged Service:

<https://www.gov.uk/government/publications/planning-advice-environment-agency-standard-terms-and-conditions>

Depending on the enquiry we may also provide advice on other issues related to our responsibilities, including flooding, waste, land contamination, water quality, biodiversity, navigation, pollution, water resources, foul drainage or Environmental Impact Assessment.

Flood Risk Assessment (FRA) Guidance

You should refer to the Planning Practice Guidance of the National Planning Policy Framework (NPPF) and the Environment Agency's Flood Risk Standing Advice for information about Flood Risk Assessment (FRA) for new development in the different Flood Zones. These documents can be accessed via:

customer service line 03708 506 506
gov.uk/environment-agency

National Planning Policy Framework Planning Practice Guidance:
<http://planningguidance.planningportal.gov.uk/>

Environment Agency advice on FRAs:

<https://www.gov.uk/flood-risk-assessment-for-planning-applications#when-to-follow-standing-advice>

<https://www.gov.uk/government/publications/planning-applications-assessing-flood-risk>

C Wiltshire Council Drainage Search

15th July 2025

F.A.O. Timea Faber
JBA Consulting
Floor 4 Maybrook House
31/35 Grainger St
Newcastle
Newcastle upon Tyne
NE1 5JE

Wiltshire Council Highways
Drainage Team
Bath Road Industrial Estate
CHIPPENHAM
SN14 0AB

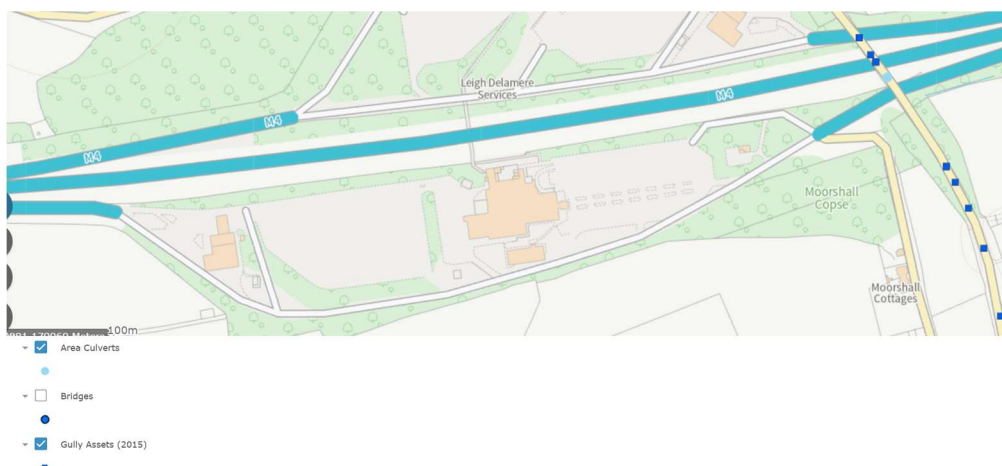
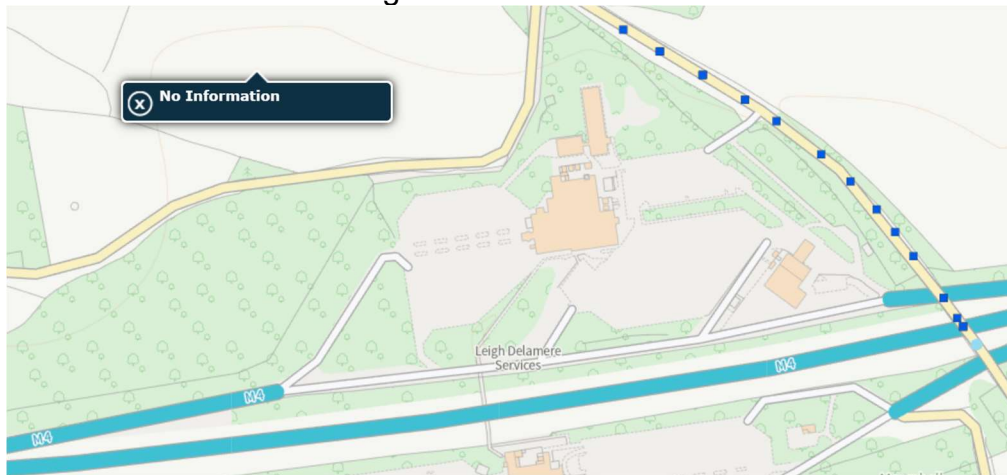
Your ref:
Our ref :DS833/07.25

Dear Timea Faber

Re: Drainage Search 833/07 Moto Leigh Delamere, Wiltshire

Thank you for your application in which you ask for the location of drainage apparatus in the above area. The main apparatus the Highway Authority is likely to have in the carriageway is highway surface water drainage.

The inset from our mapping system below shows the drainage infrastructure that we are aware of in this area of Leigh Delamere Moto Services.



During all excavations within the highway, you must at all times use the appropriate equipment to locate any electrical cabling for street lighting, loops for traffic lights etc. These types of installations can be placed within the highway at varying depths; we are unable to provide drawings of their locations.

Wiltshire Council's hierarchy for Surface Water Disposal is detailed below for your information.

Yours sincerely

Name

Position

Drainage Team

Tel:

Email:

Web: www.wiltshire.gov.uk

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Disposal for Surface Water

The hierarchy is as follows:-

1. Disposal of surface water on site
2. Disposal of surface water to watercourse (would require LDC in addition for connection works)
3. Disposal to Public Sewer
4. Disposal to Public foul sewer
5. Possible connection to Highway Drainage network.

If you wished to investigate connection to the highway drainage, you will need to supply the following:

- CCTV survey of proposed connection point to the outfall point of that system (even if it's 1km+ away!)
- Hydraulic Modelling of the system, and evidence that the proposed limited connection rate would not cause surcharge or capacity issues downstream

- Schedule of works for repairs to downstream system to ensure capacity, and/or upsizing of existing system to accept flows if surcharging occurs in model (and evidence that the upsizing will cure the issue)

Firstly however, we would advise that the proposed site is tested to BRE365 to investigate the option of onsite soakaway or borehole disposal, as it may save a lot of time and effort in the longer term.

There is no automatic right of connection to the highway drainage, thus we maintain a standing objection to suggestions using it as a solution. However, if the first 4 criteria have been investigated and can be proven not to be viable, we can consider connection to the highway drainage.

As mentioned below, you'd still have to undertake all that evidence based investigation, modelling and design work: as well as providing significant attenuation on site and then provide all that as an option for consideration.

We may still say no even at that point. The highway drainage is provided to drain the highway, not surrounding lands.

If the site has an existing connection, it may help the application, but we'd likely seek to attenuate the flows into our system over the existing flow rate or seek that the existing connection is removed. As a private asset, Wiltshire Council reserve the right to set the connection rate to ensure correct drainage of the highway.

You are still required to have exhausted all the other hierarchy criteria before getting to that point

Offices at

Bristol
Coleshill
Doncaster
Dublin
Edinburgh
Exeter
Glasgow
Haywards Heath
Leeds
Limerick
Newcastle upon Tyne
Newport
Peterborough
Portsmouth
Saltair
Skipton
Tadcaster
Thirsk
Wallingford
Warrington

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