

Flood Risk Assessment &
Sustainable Drainage Statement

Brick Kiln Street

Fisher German



FLOOD RISK ASSESSMENT AND SUSTAINABLE DRAINAGE STATEMENT

Project

Brick Kiln Street Phase 2

Client

Fisher German

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EXECUTIVE SUMMARY

This Flood Risk Assessment (FRA) and Drainage Statement (DS) has been prepared for Fisher German by Lumax Consulting, in respect of an Outline planning application for up to 195 dwellings (including affordable housing) at the site of Cadent's Offices, Brick Kiln Lane, Hinckley, LE10 0JT.

The site lies entirely in Flood Zone 1. An investigation of flood risk has been carried out and has not identified any significant fluvial, pluvial, groundwater, canal, reservoir or sewer-based risks in the area of the site. Some simple mitigation in the form of marginally elevated finished floor levels and sensible flood routing is recommended to manage any residual risk.

The existing site is currently an entirely impermeably surfaced car park to the north and carpark and office buildings to the south. The proposed development of the site will introduce gardens, landscaping and permeable areas, thus substantially reducing any surface water run off across the site in its entirety.

A drainage statement has been prepared demonstrating how the site can be drained of surface water at a restricted rate. Although the minimum requirements could be met by restricting the development to existing rates less 30% for betterment, the LLFA have insisted that the proposed development exceed the minimum requirements of the Non-Statutory Technical Standards for SuDS and restrict to greenfield rates. This report provides volumes for both scenarios. In order to restrict the proposed development to the existing rate less 30% betterment 1,150m³ of storage will be required. Greenfield restrictions will require 2,100m³ of restrictions. The storage is to be arranged in three catchments and the arrangement is detailed in the text of this report.

Foul from the development will be drained to the local network and Severn Trent Water have confirmed that they have capacity in the system for the proposed flows.

Based on this assessment and subject to the mitigation measures proposed, the development is fully compliant with the National Planning Policy Framework.



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1.0 INTRODUCTION

- 1.1 This Flood Risk and Drainage Assessment has been prepared for Fisher German on behalf of their client Cadent in respect of an Outline planning application for up to 195 dwellings (including affordable housing) with all matters reserved other than access together with associated landscaping and other infrastructure at the site of Cadent's Offices, Brick Kiln Lane, Hinckley, LE10 0JT (approx. coordinates 442000,293900).
- 1.2 This FRA has been carried out in accordance with the requirements of the National Planning Policy Framework (NPPF)¹ and associated Planning Practice Guidance (PPG)².
- 1.3 This FRA process investigates the risk posed to the site from fluvial, pluvial, sewer, reservoir, canal and groundwater-based sources. A section in the document provides an assessment of drainage requirements.

Sources of Information

- 1.4 The report has been based upon a variety of information sources and a full list of data sources is included below;
- *Environment Agency Correspondence*
 - *Seven Trent Water Correspondence*
 - *National and Local Planning Policy*
 - *Topographical Survey*
 - *Proposed site layout drawing*
 - *Strategic Flood Risk Assessment*

Existing Site

- 1.5 The proposed site is located to the southeast of Hinckley town centre to the north of the B4666, Coventry Road. The site lies approximately 2km to the east of the A5 which leads to Tamworth approximately 20 km to the northwest and the M1 motorway approximately 20 km to the southeast. A location plan for the site is included below as **FIGURE 1.1**.
- 1.6 The site is surrounded largely by residential development to the northeast and southwest, with commercial development to the southeast. A large area of parkland, Clarendon Park, lies to the northwest of the site. The Battling Brook flows along the northern boundary of the parkland, approximately 100m from the site boundary.

¹ National Planning Policy Framework, Department for Communities & Local Government, Sept 2023

² Planning Practice Guidance, Department for Communities & Local Government, Live Web Source



- 1.7 Intermittent trees and a grass verge form the border of the majority of the northern car park. This continues down the western boundary of the site, with the grass verge sloping down to the rear fences of the adjacent residential gardens and continues along the southern boundary with Coventry Road. Brick Kiln Street forms the boundary between the southeast of the site and Lidl. The Cadent car park extending out to the east of the site is bordered by the Lidl car park to the south and gardens of residential properties along Trinity Vicarage Road to the north.
- 1.8 The area of the entire site is approximately 6 hectares in total. Residential development is planned across the whole site, incorporating access roads, parking, gardens and landscaping, including attenuation ponds
- 1.9 A topographical survey has been carried out and is included as **APPENDIX A**. The site falls from the east to the northwest, with highs in the far east of the site of around 116.4m AOD to lows in the north west of approximately 101.2m AOD. There is a high point in the central south of the site from where the site falls to the southeast where the junction of Brick Kiln Street and Coventry Road stands at approximately 110.3m AOD, falling to 109.0m AOD in the far south western corner.
- 1.10 Much of the northern section of the site lies between approximately 103m AOD and 107m AOD, with highs of 109.5mAOD in the north east to lows of 101.2m AOD in the north west.
- 1.11 A location plan is included below as **FIGURE 1.1**.



Figure 1-1 Approximate Site Location



Proposed Development

- 1.12 The proposal comprises the development of up to 195 residential dwellings with associated gardens, parking and driveways and landscaping including ponds to attenuate the flow from the development.
- 1.13 The application is for outline approval only and the applicant wishes to leave the final layout, plot types and all other matters reserved for a future detailed application. Nevertheless, an outline proposed layout has been provided and is included as **APPENDIX B**. It should be borne in mind that the layout should be used to understand the general intent and quanta of development only.



2.0 PLANNING CONTEXT

The National Planning Policy Framework

2.1 The National Planning Policy Framework (NPPF), originally introduced in 2012 and subsequently updated in 2018, 2019, 2021 and 2023, sets out the government's planning policies for England and how these should be applied. It acts as guidance for local planning authorities and decision-takers, both in drawing up plans and making decisions about planning applications.

2.2 The revised NPPF reinforces the principle set out in the 2012 NPPF that the purpose of the planning system is to contribute to the achievement of sustainable development. Sustainable development is broadly defined as: -

"Meeting the needs of the present without compromising the ability of future generations to meet their own needs"

2.3 Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):

- a) *an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;*
- b) *a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and*
- c) *to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.*

2.4 Paragraph 158 of the NPPF explains expectations in relation to Climate Change

Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure



2.5 Paragraph 167 of the NPPF explains the application of the Sequential test.

All plans should apply a sequential, risk-based approach to the location of development – taking into account all sources of flood risk and the current and future impacts of climate change – so as to avoid, where possible, flood risk to people and property. They should do this, and manage any residual risk, by:

- a) applying the sequential test and then, if necessary, the exception test as set out below;*
- b) safeguarding land from development that is required, or likely to be required, for current or future flood management;*
- c) using opportunities provided by new development and improvements in green and other infrastructure to reduce the causes and impacts of flooding, (making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management); and*
- d) where climate change is expected to increase flood risk so that some existing development may not be sustainable in the long-term, seeking opportunities to relocate development, including housing, to more sustainable locations.*

2.6 Paragraph 168 explains the purpose of the sequential test –

The aim of the sequential test is to steer new development to areas with the lowest risk of flooding from any source. Development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower risk of flooding. The strategic flood risk assessment will provide the basis for applying this test. The sequential approach should be used in areas known to be at risk now or in the future from any form of flooding.

2.7 Paragraphs 169 to 171 go on to explain the purpose of the exception test -

169. If it is not possible for development to be located in areas with a lower risk of flooding (taking into account wider sustainable development objectives), the exception test may have to be applied. The need for the exception test will depend on the potential vulnerability of the site and of the development proposed, in line with the Flood Risk Vulnerability Classification set out in Annex 3.

170. The application of the exception test should be informed by a strategic or site-specific flood risk assessment, depending on whether it is being applied during plan production or at the application stage. To pass the exception test it should be demonstrated that:

- a) the development would provide wider sustainability benefits to the community that outweigh the flood risk; and*
- b) the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.*



171. Both elements of the exception test should be satisfied for development to be allocated or permitted.

2.8 In Paragraph 173 of the NPPF it is advised that

When determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood-risk assessment. Development should only be allowed in areas at risk of flooding where, in the light of this assessment (and the sequential and exception tests, as applicable) it can be demonstrated that:

- a) within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;*
- b) the development is appropriately flood resistant and resilient such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment;*
- c) it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;*
- d) any residual risk can be safely managed; and*
- e) safe access and escape routes are included where appropriate, as part of an agreed emergency plan.*

2.9 Paragraph 174 of the NPPF states that

Applications for some minor development and changes of use should not be subject to the sequential or exception tests but should still meet the requirements for site-specific flood risk assessments set out in footnote 59.

With Footnote 59 advising

A site-specific flood risk assessment should be provided for all development in Flood Zones 2 and 3. In Flood Zone 1, an assessment should accompany all proposals involving: sites of 1 hectare or more; land which has been identified by the Environment Agency as having critical drainage problems; land identified in a strategic flood risk assessment as being at increased flood risk in future; or land that may be subject to other sources of flooding, where its development would introduce a more vulnerable use

2.10 Paragraph 175 of the NPPF sets out that.

Major developments should incorporate sustainable drainage systems unless there is clear evidence that this would be inappropriate. The systems used should:

- a) take account of advice from the lead local flood authority;*
- b) have appropriate proposed minimum operational standards;*
- c) have maintenance arrangements in place to ensure an acceptable standard of operation for the lifetime of the development; and*
- d) where possible, provide multifunctional benefits.'*



Planning Practice Guidance

- 2.11 The Planning Practice Guidance (PPG) associated with the NPPF provides more detailed guidance on how the requirements of the NPPF can be met in practice. It includes guidance for applying the sequential and exception tests.
- 2.12 Two critically important tables are included In the PPG and these tables should be read in conjunction with Annex 3 of the NPPF itself. Taken together the three tables define flood risk zones, flood risk vulnerability and compatibility.
- 2.13 Table 1 of the PPG describes Flood Zones. This table defines flood zones based upon event return probability and is used to steer development and classify land for development.

Table 2-1 Reproduction of Table 1 Planning Practice Guidance

Flood Zone	Definition
Zone 1 Low Probability	Land having a less than 0.1% annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map for Planning – all land outside Zones 2, 3a and 3b)
Zone 2 Medium Probability	Land having between a 1% and 0.1% annual probability of river flooding; or land having between a 0.5% and 0.1% annual probability of sea flooding. (Land shown in light blue on the Flood Map)
Zone 3a High Probability	Land having a 1% or greater annual probability of river flooding; or Land having a 0.5% or greater annual probability of sea. (Land shown in dark blue on the Flood Map)
Zone 3b The 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. (Not separately distinguished from Zone 3a on the Flood Map)



2.14 Flood Risk Vulnerability Classification, this table is now included as Annex 3 of the NPPF. This table defines development type by associated vulnerability to flooding.

Table 2-2 Reproduction of Annex 3 NPPF

Flood Zone	Definition
Essential Infrastructure	Essential transport infrastructure (including mass evacuation routes) which has to cross the area at risk. Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including electricity generating power stations and grid and primary substations; and water treatment works that need to remain operational in times of flood. Wind turbines. Solar Farms.
Highly Vulnerable	Police and ambulance stations; fire stations and command centres; telecommunications installations required to be operational during flooding. Emergency dispersal points. Basement dwellings. Caravans, mobile homes and park homes intended for permanent residential use. Installations requiring hazardous substances consent. (Where there is a demonstrable need to locate such installations for bulk storage of materials with port or other similar facilities, or such installations with energy infrastructure or carbon capture and storage installations, that require coastal or water-side locations, or need to be located in other high flood risk areas, in these instances the facilities should be classified as 'Essential Infrastructure').
More Vulnerable	Hospitals Residential institutions such as residential care homes, children's homes, social services homes, prisons and hostels. Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels. Non-residential uses for health services, nurseries and educational establishments. Landfill* and sites used for waste management facilities for hazardous waste. Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan.
Less Vulnerable	Police, ambulance and fire stations which are not required to be operational during flooding. Buildings used for shops; financial, professional and other services; restaurants, cafes and hot food takeaways; offices; general industry, storage and distribution; non-residential institutions not included in the 'More Vulnerable' class; and assembly and leisure. Land and buildings used for agriculture and forestry. Waste treatment (except landfill* and hazardous waste facilities). Minerals working and processing (except for sand and gravel working). Water treatment works which do not need to remain operational during times of flood. Sewage treatment works, if adequate measures to control pollution and manage sewage during flooding events are in place. Car Parks
Water Compatible Development	Flood control infrastructure. Water transmission infrastructure and pumping stations. Sewage transmission infrastructure and pumping stations. Sand and gravel working. Docks, marinas and wharves. Navigation facilities. Ministry of Defence installations. Ship building, repairing and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location. Water-based recreation (excluding sleeping accommodation). Lifeguard and coastguard stations. Amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms. Essential ancillary sleeping or residential accommodation for staff required by uses in this category, subject to a specific warning and evacuation plan.



- 2.15 Flood Risk Vulnerability and flood zone 'incompatibility' outlines the circumstances in which development may or may not be appropriate and when an Exception Test will be required.

Table 2-3 Reproduction of Table 2 Planning Practice Guidance

Flood Zones	Flood Risk Vulnerability Classification				
	Essential infrastructure	Highly Vulnerable	More Vulnerable	Less Vulnerable	Water Compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test Required	✓	✓	✓
Zone 3a	Exception Test Required	Development should not be permitted	Exception Test Required	✓	✓
Zone 3b	Exception Test Required	Development should not be permitted	Development should not be permitted	Development should not be permitted	✓

Hinckley and Bosworth Borough Council Core Strategy

- 2.16 The Core Strategy was adopted in 2009 and is currently being reviewed. Its purpose was to guide the council in meeting future development needs and provide a steer on housing and employment growth.
- 2.17 Paragraph 4.31 of the Core Strategy identifies Market Bosworth as a Key Rural Centre. Paragraph 4.33 goes on to explain that in order to support these villages as Key Rural Centres, they will be the focus for improvements to employment, services, facilities and public transport.
- 2.18 The core strategy links to a number of policies and of note in respect to flood risk and drainage is Policy DM7, Preventing Pollution and Flooding requires that development proposals demonstrate : -
- It will not adversely impact the water quality, ecological value or drainage function of water bodies in the borough;
 - Appropriate containment solutions for oils, fuels and chemicals are provided;
 - All reasonable steps are taken through design, siting and technological solutions to ensure the abatement of obtrusive light to avoid sky glow, glare and light intrusion;
 - It would not cause noise or vibrations of a level which would disturb areas that are valued for their tranquillity in terms of recreation or amenity;
 - Appropriate remediation of contaminated land in line with minimum national standards is undertaken;
 - It will not result in land instability or further intensify existing unstable land;



- g) The development doesn't create or exacerbate flooding by being located away from areas of flood risk unless adequately mitigated against in line with National Policy.

Strategic Flood Risk Assessment for Hinckley and Bosworth Borough Council

- 2.19 The SFRA for Hinckley and Bosworth was completed in July 2019. It was written to support the production of the new Local Plan to 2036 which is currently being reviewed.
- 2.20 The SFRA is used to guide appropriate locations for future new development and sustainable flood risk management policies.
- 2.21 With reference to Future Developments, the SFRA states that development should be located in areas of lowest flood risk and that Sustainable Drainage should be considered at the earliest opportunity.

Leicestershire County Council Preliminary Flood Risk Assessment

- 2.22 The Leicestershire County Council Preliminary Flood Risk Assessment was adopted in June 2011. The main scope of the report was to 'provide a high-level summary of significant flood risk' in relation to past and future risk from surface water, groundwater, and main rivers, the sea and any other watercourses.
- 2.23 However, the report is now somewhat outdated and more current data information is available which will be used to inform this FRA.

Local Flood Risk Management Strategy

- 2.24 The new Leicestershire County Council Local Flood Risk Management Strategy was adopted in February 2024. It addresses only local flood risk, ie from surface water, groundwater and ordinary water courses.
- 2.25 The strategy lays out the principles, strategies and measures to understand, assess and manage local flood risk.

Flood Risk Status

- 2.26 The proposed development lies on land classified as Flood Zone 1. An extract from the EA Flood Map for Planning is included below as **FIGURE 2-1**.

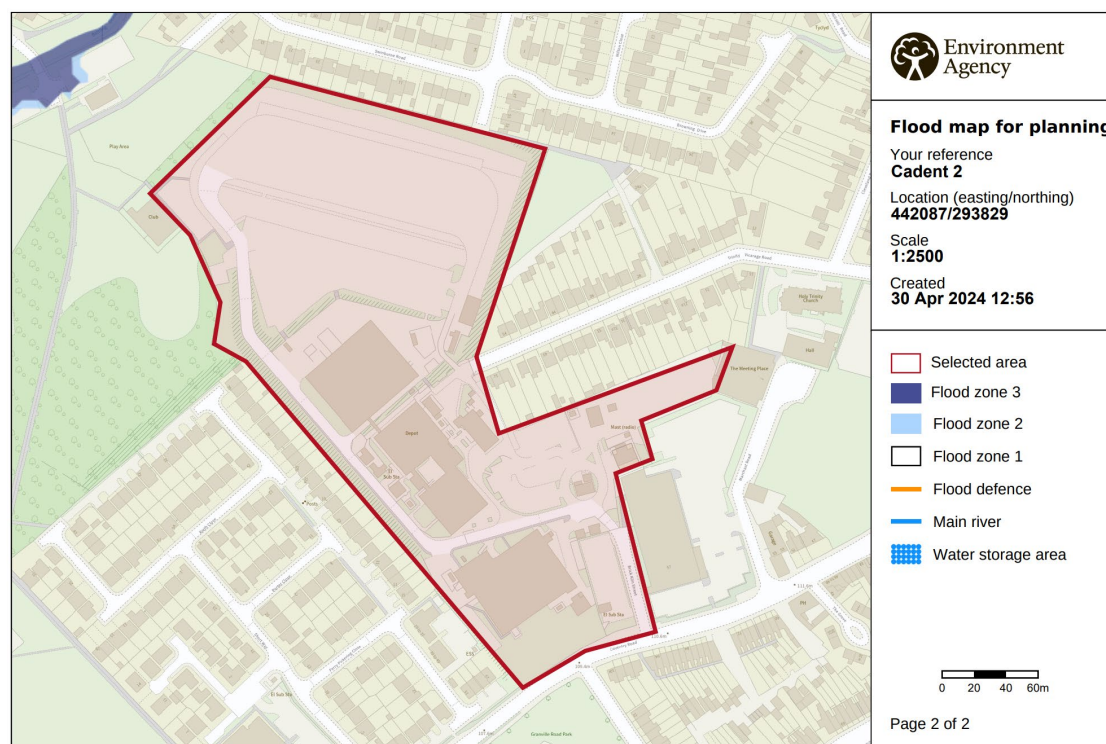


Figure 2-1 EA Flood Map Extract

- 2.27 The existing use of the site, as commercial is designated as 'less vulnerable' under the guidance given in Table 2 of the PPG.
- 2.28 The proposed development type is residential which is classified as more vulnerable'.
- 2.29 In accordance with the NPPF for 'more vulnerable' development situated in FZ1, a sequential and exception test is not required, and the development is considered appropriate. A summary of the flood risk status of the proposed development is provided below in **TABLE 2-4**.

Table 2-4 Flood Zone Status Summary

Flood Zone	Flood Zone 1
Development Vulnerability Classification	More Vulnerable
Flood Zone Compatibility	Sequential and Exception Test Not Required



3.0 FLOOD RISK ASSESSMENT

Existing Risks

- 3.1 In accordance with the NPPF and local planning guidance this FRA considers the risk posed to the development from a range of sources. This section of the report details the investigation of flood risk from all pertinent sources; a subsequent section provides recommended mitigation where the risk is deemed significant.
- 3.2 The flood risks that may be posed to the site are summarised below in **TABLE 3-1**. The degree of risk posed to the study site is indicated in the table and specifics relating to the site are outlined and described in greater detail within the forthcoming section.

Table 3-1 Pre-Mitigation Flood Risks

Flood Type	Degree of Risk	Source of Risk
Fluvial	None	The site is not at risk from fluvial sources.
Tidal	None	The development is not in a tidally influenced area.
Canals	None	There are no canals that pose a risk to the site.
Groundwater	Low	The ground conditions are such that groundwater flooding is unlikely.
Sewers	None	No history of flooding recorded.
Pluvial Runoff	Low	Not significant provided the proposed drainage system is effective.
Reservoirs and Waterbodies	None	No history of flooding recorded

Fluvial Risk

- 3.3 The EA flood maps have been consulted and the proposed development is not considered to be at any risk of fluvial flooding associated with any main river or modelled watercourse. The Flood Map for Planning, as shown in Fig 2.1, identifies the site to be within Flood Zone 1.
- 3.4 The nearest main watercourse is the Battling Brook, which is located, at its closest point, just over 100m northwest of the site.
- 3.5 Modelled data of the in-channel levels was obtained from the Environment Agency, and can be seen in **APPENDIX C**. This shows the highest level in the brook is during a 1:100yr event and measures 99.816m AOD. This is almost 3 metres below the lowest levels on site which stand at approximately 102.7m AOD at the lowest point. This confirms that the site is not at risk of fluvial flooding from the Battling Brook.

Canals

- 3.6 The Ashby de la Zouch Canal runs north to south approximately 1.5km to the west of the site. At this distance, there is no risk posed to the site by the canal.

Groundwater Flooding

- 3.7 The British Geological Survey mapping of the area has been studied and suggests a bedrock geology of Mercia Mudstone.
- 3.8 With the impermeable nature of the substrate, the emergence of groundwater would be unlikely, however, some residual risk cannot be ruled out entirely.

Pluvial Risk

- 3.9 The EA publish surface water flood maps which show the route of surface water across the ground. Typically, these flood maps identify overland drainage paths that are often part of a natural land drainage systems an extract is included as **FIGURE 3.1**.

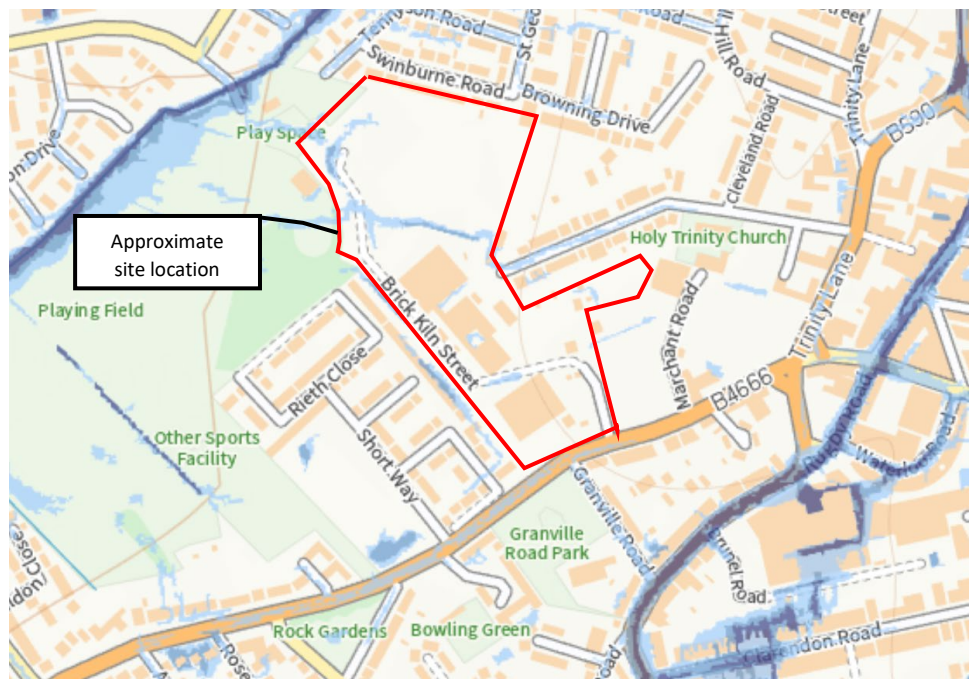


Figure 3-1 Pluvial Flood Risk

- 3.10 Environment Agency surface water mapping indicates that the site is at low risk from isolated patches of low level surface water flooding. The flooding appears to be generally site born and does not present any significant conveyance route. The mitigation discussed later in this document will explain how this low-level flooding will be managed.

Sewer Flooding

- 3.11 Severn Trent Water have been consulted and have reported no historic records of sewer flooding in the vicinity. Furthermore, the area is served by an extensive system of well-maintained sewers, with capacity for the additional residential development.



Reservoirs and Waterbodies

- 3.12 The Environment Agency Long Term Flood Maps show the site is not in an area at risk from reservoir inundation.

Historic Flooding

- 3.13 No incidents of historic flooding have been highlighted from any source at the site. However, it is acknowledged that some flood incidents may not be reported.
- 3.14 Furthermore, there is no reference to flooding in the area of the site in the local planning documentation.

Proposed Mitigation

- 3.15 The majority of the site is currently impermeably surfaced. As can be seen from the proposed layout attached as **APPENDIX B**, the new development incorporates gardens and public green areas which will introduce permeable areas, driveways and minor access roads will incorporate under drained permeable paving.
- 3.16 Finished floor levels of the dwellings will be raised 150 mm above ground level to mitigate against any residual risk of surface water or ground water emergence. Furthermore, levels will be arranged to ensure exceedance routes direct any residual flows away from entrances.
- 3.17 The investigation has shown that there are no significant flood risks to the site itself and simple mitigation measures should be sufficient to manage any residual risk. Moreover, the proposed development will not give rise to any additional flood risk either as a result of impedance of flood flow or increased runoff. The proposal will result in a significant reduction in impermeable area and associated reduction in runoff.



4.0 SURFACE WATER DRAINAGE STATEMENT

- 4.1 The developer is applying for outline consent with all matters reserved. The intention of this drainage statement is to demonstrate that the volumetric and spatial needs of an eventual drainage system can be met and that a viable drainage solution is practically achievable for the development.
- 4.2 It is to be acknowledged that further work will be required relating to the detailed design of the drainage infrastructure required to serve the site. However, this report provides sufficient information to demonstrate that a viable solution exists and that there is no technical drainage issue that would prevent successful development of the site.

Existing Drainage

- 4.3 A full drainage connectivity survey has been carried out and is included in [APPENDIX D](#). The key sewers and drains identified are summarised below.
- 4.4 The existing site is connected to the public system via a number of public and private drains. The key pipes are identified on the sketch below.

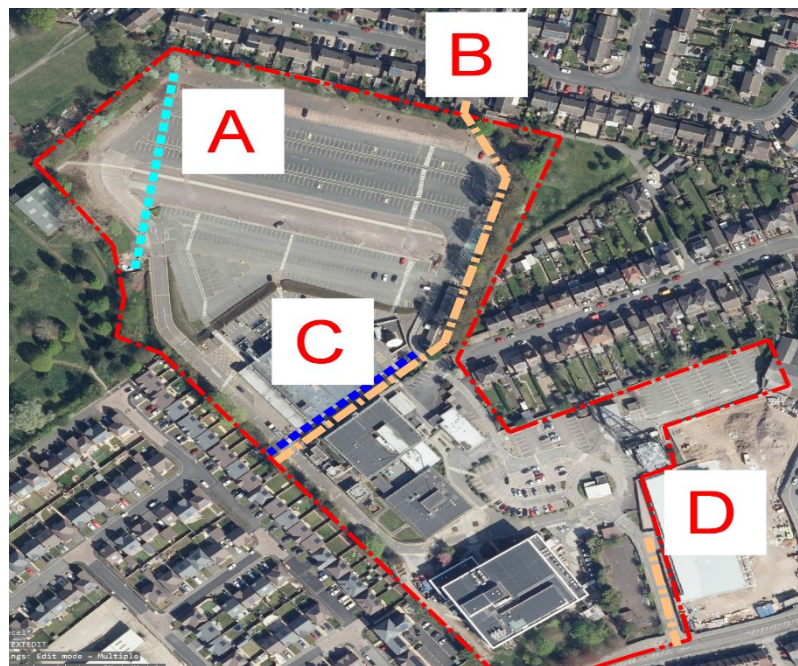


Figure 4-1 Key Drainage Pipes

- 4.5 A combined 525mm public sewer crosses the centre of the site serving both the neighbouring residential areas and the foul needs of the site itself. The sewer is identified as [PIPE B](#) on the sketch above.



- 4.6 A 300mm private surface water drain flows alongside this pipe through some of the site and serves the bulk of the surface water needs of the southern site. This pipe is identified as **PIPE C** on the sketch above. It is not clear how the surface water drain is connected to the public sewer or wider land drainage network and further investigation will be required to confirm the outfall of this pipe.
- 4.7 It is possible that surface water from this area of the site drains to both the combined and surface water sewer, again, further investigation would be required to confirm this.
- 4.8 A smaller 225mm public combined sewer along Brick Kiln Street discharging into the main sewer running south along Coventry Road. This sewer is identified as **PIPE D** on the key plan.
- 4.9 A 525mm private surface water sewer has been identified in the drainage survey crossing the north west of the site identified as **PIPE A** on the plan. Gullies and catch pits run throughout the northern carpark area, channelling surface water to this pipe. The drainage survey noted that the outfall of this pipe heads into the adjacent parkland. The surveyor was able to sonically connect the drainage however, when they dye tested the outfall from site, they were unable to positively identify any dye in the nearest downstream manhole. It is presumed there may be a buried manhole in the park which the site drainage discharges into or that the system connects on a branch. Further investigation is recommended prior to commencing construction.
- 4.10 Pipe A is thought to just serve just the car park area but may also serve the residential area to the north. This will also need further investigation prior to commencing construction. Should the sewer serve the residential area as well as the site, it will need rerouting around the northern boundary. If, however, it only serves the site itself it can be abandoned. Sufficient space should be allocated in the design for either eventuality.
- 4.11 The STW sewers on site require easements either side with no buildings or trees. An easement of 3m is required either side of the 225mm sewer (pipe D) adjacent to Brick Kiln Street and an easement of 5m is required either side of the 525mm sewer which crosses the centre of the site (pipe B). Should the existing 525mm pipe in the north of the site require rerouting, a 5m easement should be allowed on the inside of this.

Existing Discharge Rate

- 4.12 A full impermeable area analysis of the existing site has been carried out and a drawing is included as **APPENDIX E**. The total existing impermeable area has been calculated as 4.77ha.
- 4.13 An estimate of the likely runoff associated with the existing site can be made by using the Rational Method as follows:

$$Q = 2.78 \times A_i I$$



- 4.14 Where Q = runoff in l/s, A_i is the site impermeable area in Hectares, and I is the rainfall intensity in mm/hour.
- 4.15 An estimate of the runoff rate from the entire of the site has been carried out and the results are summarised below in [TABLE 3.1](#). Rainfall values have been taken from Microdrainage software using the latest FEH rainfall model.

Table 4-1 Existing Runoff Rates for Existing Site

Return Period	Rainfall Rate (mm/hr)	Impermeable Area (Ha)	Runoff Rate (l/s)
2 Year	33.4	4.77	442
1:30 Year	73.0	4.77	968
1:100 Year	96.0	4.77	1273

- 4.16 The table above indicates a significant existing discharge rate for the 1:2 year, 1:30 year and 1:100-year return periods.
- 4.17 However, the site is arranged in three distinct catchments each served by drainage system with a separate outfall and it is useful to separate the total flow into these catchments. The outfalls and drainage catchments are associated with Pipe A, C and D in Figure 4.1 and to maintain consistency the catchments will be described by these letters. These catchments account for approximately 49%, 45% and 6% of the overall site respectively. The approximate breakdown of the catchments is shown in [Figure 4-2](#).

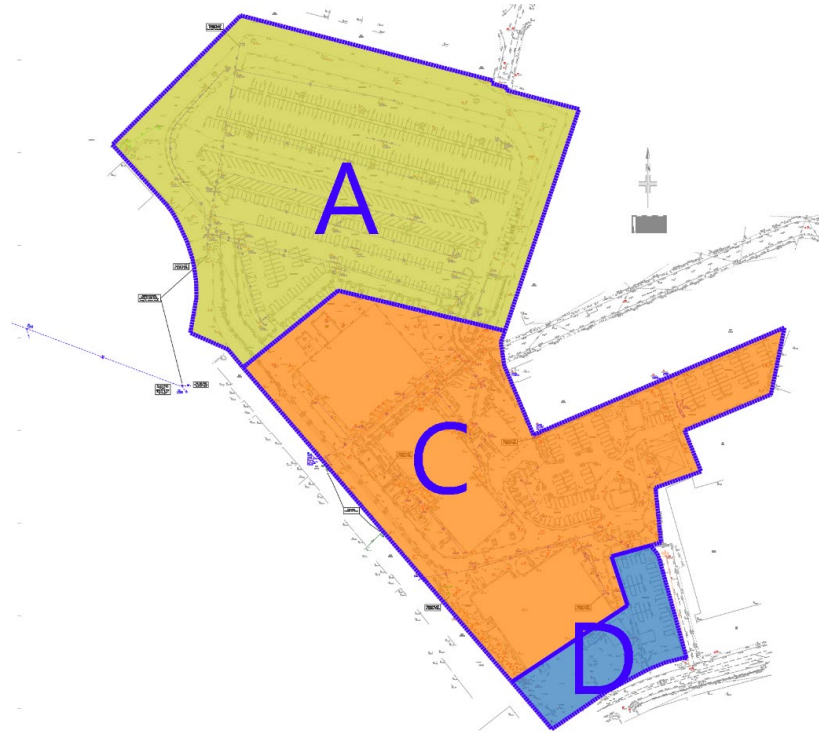


Figure 4-2 Approximate Existing Catchment Arrangement

- 4.18 The discharge rates presented in Table 4-1 show the potential rates for the entire site. The rates can be apportioned to each catchment and the associated 1:2, 1:30 and 1:100 rates are shown in Table 4-2.

Table 4-2 Existing Discharge Rates by Catchment

Return Period	Catchment A	Catchment C	Catchment D
Impermeable Area (ha)	23100	21670	2910
2 Year (l/s)	214	201	27
1:30 Year (l/s)	468	440	59
1:100 Year (l/s)	616	579	77

- 4.19 It should be noted that the table shows the maximum runoff rate that could occur over each catchment. However, each catchment is limited by the discharge pipe associated with the drainage system.
- 4.20 Catchment A is limited by a 525mm surface water pipe crossing the northwest of the site at gradient of 1:125; the pipe full discharge capacity of this pipe has been calculated at 433.4l/s.
- 4.21 Catchment C is limited by a 300mm pipe laid at a gradient of 1:30; such a pipe would be expected to have a pipe full capacity of 203l/s.



- 4.22 Catchment D is limited by a 225mm pipe laid at a gradient of 1:150; the pipe full discharge capacity of this pipe has been calculated at 42.3l/s.
- 4.23 The rates described above are the pipe full capacities only, when surcharged it would be expected that this pipe could convey far more flow than this. Nevertheless, conservatively the figures above can be used to understand the maximum discharge rates from each area of the site. The pipe constrained figures show that flows are somewhat constrained in the 1:30 year event for all catchments but the 1:2 year flow is unconstrained.

Discharge Options

- 4.24 In accordance with the Building Regulations, the Non-Statutory Technical Standards for SuDS and prevailing best practice, surface water should be discharged according to the following preferential hierarchy.
- *Infiltration*
 - *Watercourse, River, Ditch*
 - *Surface Water Sewer*
 - *Combined Sewer*
- 4.25 The favoured method of discharge is infiltration. However, the British Geological Maps show that the site lies on Mercia Mudstone. Furthermore, the Geo-Environmental Desk Study carried out for the site confirms the Mercia Mudstone bedrock and identifies superficial deposits of Bosworth Clay Member underlying the majority of the site. The report states that 'Soakaway drainage is unlikely to be feasible for the majority of the site given the anticipated predominance of cohesive strata.'
- 4.26 This outline assessment is based upon the worst-case assumption that drainage by infiltration will not be viable.
- 4.27 The nearest watercourse to the site is the Battling Brook. At its closest point, the brook lies 100m north of the site boundary, across third party land so discharge directly to the brook is also not considered to be a viable option.
- 4.28 Severn Trent Water have been consulted and confirmed they have capacity in the public system and discharge to the public sewers is the only viable option.
- 4.29 For the bulk of the site surface water, discharge to STW Manhole 9801 or 8802 will be the preferred point of connection. The invert level of these manhole is recorded as 101.03m AOD and 98.79m AOD respectively. Ground levels across the site are significantly above this level, allowing for reasonable fall and cover. A connection should be feasible from all the development area. Drainage connectivity investigations suggest that the bulk of the northern site discharges to this manhole via an existing private connection pipe. This pipe could be reused and adopted by STW under a Section 102 agreement.



- 4.30 Catchments C and D as described below may discharge either to Manhole 9801, or 8802 via an appropriate internal connection arrangement. Or if preferred individual connections to the surface water drain serving Catchment C or the combined sewer serving Catchment D could be made subject to discussions with STW and confirmation of the outfall arrangement of Catchment C.

Proposed Discharge Rate

- 4.31 The Non-Statutory Technical Standards for Sustainable Drainage requires that discharge from proposed development is limited such that the proposed 1:1,1:30 and 1:100 discharge rates do not exceed that of the existing discharge rates.
- 4.32 A staged approach to discharge such as that described above requires consideration of the long-term storage volume requirements. The long-term storage requirement is stated as follows: -

Where reasonably practicable, for developments which have been previously developed, the runoff volume from the development to any highway drain, sewer or surface water body in the 1 in 100 year, 6-hour rainfall event must be constrained to a value as close as is reasonably practicable to the greenfield runoff volume for the same event but should never exceed the runoff volume from the development site prior to redevelopment for that event.

- 4.33 In practice, for sites where infiltration is not viable, this requirement translates to a need to release the excess volume (above greenfield) at a trickle rate not considered to cause any risk, often taken in such circumstances as 2l/s/ha.
- 4.34 An alternative approach to a staged discharge and consideration of the long-term storage volume is to limit flows from the site to the existing QBar rate for all return period events.
- 4.35 In the case of this development, it is apparent that the runoff volume from the existing site which is almost 80% impermeable would be significant and the proposed residential development will introduce significantly more permeable areas. Runoff volume from the proposed development will therefore be lower than existing given the significant reduction in impermeable cover. Accordingly, the long term storage component need not be considered and a staged discharge could be viable.
- 4.36 The standards dictate that runoff should be restricted to existing rates which, in this case will be taken as the lower of the existing Qbar rate or the pipe constrained discharge rate. However, it is typically best practice to provide a betterment to existing rates. Table 4-3 below shows the minimum rate to which each catchment should be restricted to meet the requirements of the guidance along with a recommended restriction representing a 30% betterment on the existing rate.



Table 4-3 Minimum and Recommended Discharge Rate

Return Period	Catchment A	Catchment C	Catchment D
Minimum Acceptable Discharge Rate (l/s)	214	201	27
Recommended Acceptable Discharge Rate (l/s)	149.8	140.7	18.9

- 4.37 The rates shown above represent a significant reduction on the maximum potential existing rates and are all well within the maximum capacity of the discharge pipe serving the area.

Storage Volumes

- 4.38 The proposed development will cover a total area of over 6ha and a development of up to 195 dwellings together with landscaping, highways and public open space. The application is in outline form and the client at this stage intends to progress the application with parameters and an indicative layout only with all matters reserved.
- 4.39 It is logical to split the proposed development up into similar catchments to those that currently exist. Given the outline level of proposals it is not practical to carry out a full impermeable area analysis and instead a typical impermeable area percentage of 65% will be applied to each catchment. The total area of each catchment and anticipated impermeable is shown on Table 4-4.

Table 4-4 Total Area and Impermeable Area of Proposed Development Catchments

	Catchment A	Catchment C	Catchment D
Total Area(ha)	2.95	2.77	0.37
Impermeable Area (Ha)	1.92	1.80	0.24

- 4.40 An estimate of the storage volume required in order to attenuate flows to the rates shown in Table 4-5 has been produced for each catchment. Calculations have been carried out using Causeway Flow and have used the latest FEH22 data detailed output is included in [APPENDIX F](#).



Table 4-5 Proposed Storage Volumes Exceeding Minimum Required Standard

Return Period	Catchment A	Catchment C	Catchment D
Impermeable Area (ha)	1.92	1.80	0.24
1:2 (m ³)	163	148	12
1:30 +35 % (m ³)	371	341	39
1:100 + 40%cc (m ³)	567	523	64

- 4.41 Based on the calculations outlined above up to 1,150m³ of storage may be required across the site to reduce flows to 30% less than the existing Qbar rate.
- 4.42 The table above sets out the minimum volumes required to meet the standards set out in the Non-Statutory Technical Standards. However, following feedback from a previous application for this development the LLFA have indicated that they expect the proposed development to vastly exceed the minimum requirements of the standards and have asked the developer to restrict to greenfield rates.
- 4.43 Greenfield runoff rates can be estimated using the ICP SuDS implementation of the IH124 methodology. The proposed development area covers a total extent of 6.1ha. Results are provided in [APPENDIX F](#) and summarised below in Table 4-6. The table also shows the discharge rates apportioned to the individual catchments on a pro rata basis.

Table 4-6 IH124 Runoff Rates

Return Period	Greenfield Discharge Rate (l/s)	Catchment A	Catchment C	Catchment D
1	22.09	10.70	10.05	1.35
QBAR	26.62	12.89	12.11	1.62
30	53.23	25.78	24.21	3.25
1:100	68.40	33.13	31.10	4.17

- 4.44 The LLFA have advised that, where there is no increase in impermeable area as a result of the development, the greenfield runoff volume need not be considered, and the development may discharge at a rate no greater than the 100-year greenfield rate. Note that it is impractical to stage discharge from Catchment D as the discharge rates are lower than could be accommodated by a safely sized flow control device. Accordingly discharge from catchment D will be limited to 5l/s for all events.



- 4.45 An estimate of the total volume of balancing storage required on site has been made using the Microdrainage Quick Storage Module for the reduced greenfield rates. Calculations have been made for a range of return periods using the FEH rainfall profile. Full outputs are included as [APPENDIX F](#) and the results have been summarised in Table 4-7. In accordance with the latest EA Guidance an allowance has been made for climate change of up to 40% and this has been used in the calculations.

Table 4-7 Proposed Greenfield Attenuation Volumes

Return Period	Catchment A	Catchment C	Catchment D
Impermeable Area (ha)	1.92	1.80	0.24
1:2 (m ³)	179	168	17
1:30 +35 % (m ³)	700	658	75
1:100 + 40%cc (m ³)	1012	949	112

- 4.46 The calculations outlined above show that up to approximately 2,100m³ of attenuation storage will be required to restrict flows from the site to greenfield rates.
- 4.47 The outline layout has allowed for sufficient space to accommodate ponds of the size required for the worst-case greenfield discharge restriction at a depth of 1m.
- 4.48 In addition to the primary attenuation structures the developer should incorporate further source control measures where viable and appropriate. The following additional source control measures should be considered.

- *Permeable Paving*
- *Bioretention Areas/Tree Pits/ Rain Gardens*
- *Roadside Swales*
- *Rainwater Recycling Buts*
- *Vortex Separators*
- *Silt/Oil Separators*

- 4.49 The exact distribution of source control measures such as those outlined above can be resolved at the detailed design stage.
- 4.50 The developer will, as far as is possible, develop a minimum two stage treatment train.

SuDS Treatment Approach

- 4.51 Ciria C753 the SuDS Manual provides an approach to assessing the effectiveness of various SuDS techniques in controlling pollution and improving water quality. The approach is known as the simple index method and can be summarised as follows.



- 4.52 A pollution hazard index is applied to various land used from residential roofs to service yards and more hazardous areas. The Hazard Indexes for various land uses are identified below in Table 4-8.

Table 4-8 Pollution Hazard Indexes

LAND USE	Pollution Hazard Level	Total Suspended Solids	Metals	Hydrocarbons
Residential Roofs	Very Low	0.2	0.2	0.05
Other Roofs	Low	0.3	0.2	0.05
Residential Properties, Car Parking and Access Roads	Low	0.5	0.4	0.4
Commercial and Delivery Areas Higher Traffic Roads	Medium	0.7	0.6	0.7
Haulage Yards, Lorry Parks	High	0.8	0.8	0.9

- 4.53 The pollution Hazard Indexes are matched by a similar matrix indicating the potential for various SuDS components to remove contaminants. This table is reproduced below in Table 4-9.

Table 4-9 SuDS Mitigation Index

SuDS COMPONENTS	TSS	Metals	Hydrocarbons
Filter Strip	0.4	0.4	0.5
Filter Drain	0.4	0.4	0.4
Swale	0.5	0.6	0.6
Bioretention Areas	0.8	0.8	0.8
Permeable Pavement	0.7	0.6	0.7
Detention Basin	0.5	0.5	0.6
Pond	0.7	0.7	0.5
Wetland	0.8	0.8	0.8

- 4.54 Where more than one mitigation feature is to be used, the guidance suggests that the total mitigation index can be found as follows: -

$$\text{Total SuDS mitigation index} = \text{mitigation Index}_1 + 0.5(\text{mitigation index}_2)$$

- 4.55 The proposed development is residential in nature and the bulk of the land use can be described as of Low Pollution Hazard level. The primary access route through the site may be described as Medium Hazard.



- 4.56 SuDS Components will be selected from Table 4-9 in order to meet or exceed the minimum Hazard index outlined in Table 4-8.

Maintenance and Adoption

- 4.57 The proposed drainage systems will be offered for adoption by the Sewer Undertaker under a Section 104 process. Recent changes to guidance allow for the adoption of both above and below ground SuDS features and it is considered that the proposed attenuation feature will be suitable for adoption.
- 4.58 Table 4-10 has been prepared from the recommendations contained in the SuDS manual and should set minimum standards for inspection and maintenance.

Table 4-10 Suds Drainage Systems Inspection & Maintenance Regimes

Drainage Component	Maintenance Task	Frequency
Below Ground Drainage Pipes	Inspect for blockages ensure free running	Every 2 months and after any significant storm event
Surface water gullies and linear drainage features	Inspect for blockages ensure free running jet/vacuum as appropriate	Every 2 months and after any significant storm event
Permeable Paving Surface	Permeable paving to be swept/vacuumed in accordance with manufacturer's instructions	Once a year
Permeable Paving	Inspect Joints top up as required	Yearly
Catch Pits	Inspection for and Removal of Silt from catchpits	Every 6 months and after any significant storm
Attenuation Pond	Litter Pick	Every 2 months and after any significant storm
Attenuation Pond	Weeding	Every month during growing Season.
Flow Control Device	Inspect for Blockages and Correct Operation	After any Major Storm otherwise every 2 months
Outfall	Inspect for correct operation of flap valve	After any Major Storm otherwise every 2 months



Outfall	Remove Debris	Every 2 months and after any significant storm
Outfall	Check for structural integrity	Yearly



5.0 FOUL DRAINAGE STATEMENT

- 5.1 The proposed development is for up to 195 residential dwellings. The residential development will replace existing office, commercial and industrial use and the existing foul load should be assessed before demolition commences.
- 5.2 The developer should create a register of all existing WC's, sinks, showers, washing machines etc. This will allow a loading table to be produced which will demonstrate the infrastructure load of the existing use.
- 5.3 The foul load of the proposed development of 195 dwellings can be assessed on the basis of 4000l/dwelling at 6DWF which equates to a flow rate of 9l/s. For catchment planning purposes a DWF multiplier of 2 is often used and is more appropriate on larger scale developments. This equates to a total discharge rate of 3l/s.
- 5.4 Severn Trent Water have been consulted and have confirmed that these foul flows can be accommodated at MH0802. However, this manhole is located in the centre of the site. The invert level of this manhole is 104.34m AOD. Although the invert of the pipe reduces further towards the boundary of the site the reduction is not significant and a connection limit of around 104.00m exists on this combined drain run at the edge of the site. Although catchments C and D, as discussed below, should be able to drain to this connection by gravity, a pumping station will be required to serve the development associated with Catchment A.
- 5.5 Alternative options may be viable for foul connection and may be considered by the developer. Sewer records show a 225mm pipe on Brick Kiln Street. This pipe appears to serve the existing development only but may carry flows from other sources. Subject to approval from STW this pipe could accommodate some of the frontage development associated with Catchment D. However, levels are not conducive to a connection for some of Catchment C and all of Catchment A.
- 5.6 Sewer records show a further set of combined sewers to the west of the development. Sewer records do not include invert levels or cover levels on this network but based on the general topography cover levels of less than 100m AOD are expected, and invert levels should be conducive to a connection by gravity from the entirety of the site, however a requisition across third party land or by agreement will be required.
- 5.7 In conclusion foul capacity is available for the development at manhole 0802 and a pumping station will be required to drain some of the development if this connection point is pursued. Other options are possible and may be more cost effective. Further discussion with STW will be required to confirm these alternatives.



6.0 CONCLUSIONS & RECOMMENDATIONS

- 6.1 This FRA and Drainage Statement has been prepared for Fisher German on behalf of Cadent in respect of a proposed residential development at the site of Cadent's Offices, Brick Kiln Lane, Hinckley
- 6.2 This FRA has been conducted in accordance with the requirements of the NPPF and associated Planning Practice Guidance. Flooding from a variety of sources has been investigated, and the site is not considered to be at significant risk from any source.
- 6.3 Some simple mitigation is sensible to manage any residual risk not identified. External levels should be arranged to direct any exceedance or flood flow away from thresholds. Finished floor levels should be elevated 150mm above external ground level where possible.

Table 6-1 Summary of Mitigation Features

Flood Risk	Mitigation
NO RISK IDENTIFIED	FFL's to be raised above external ground levels. External ground levels to be shaped to divert flow away from property entrances
RESIDUAL CONCERNS AND BEST PRACTICE RECOMENDED	Designing for Exceedance should be adopted.
Drainage	A sustainable drainage system should be implemented which will limit flow to, as a minimum, the existing rate less an allowance for betterment of 30%.

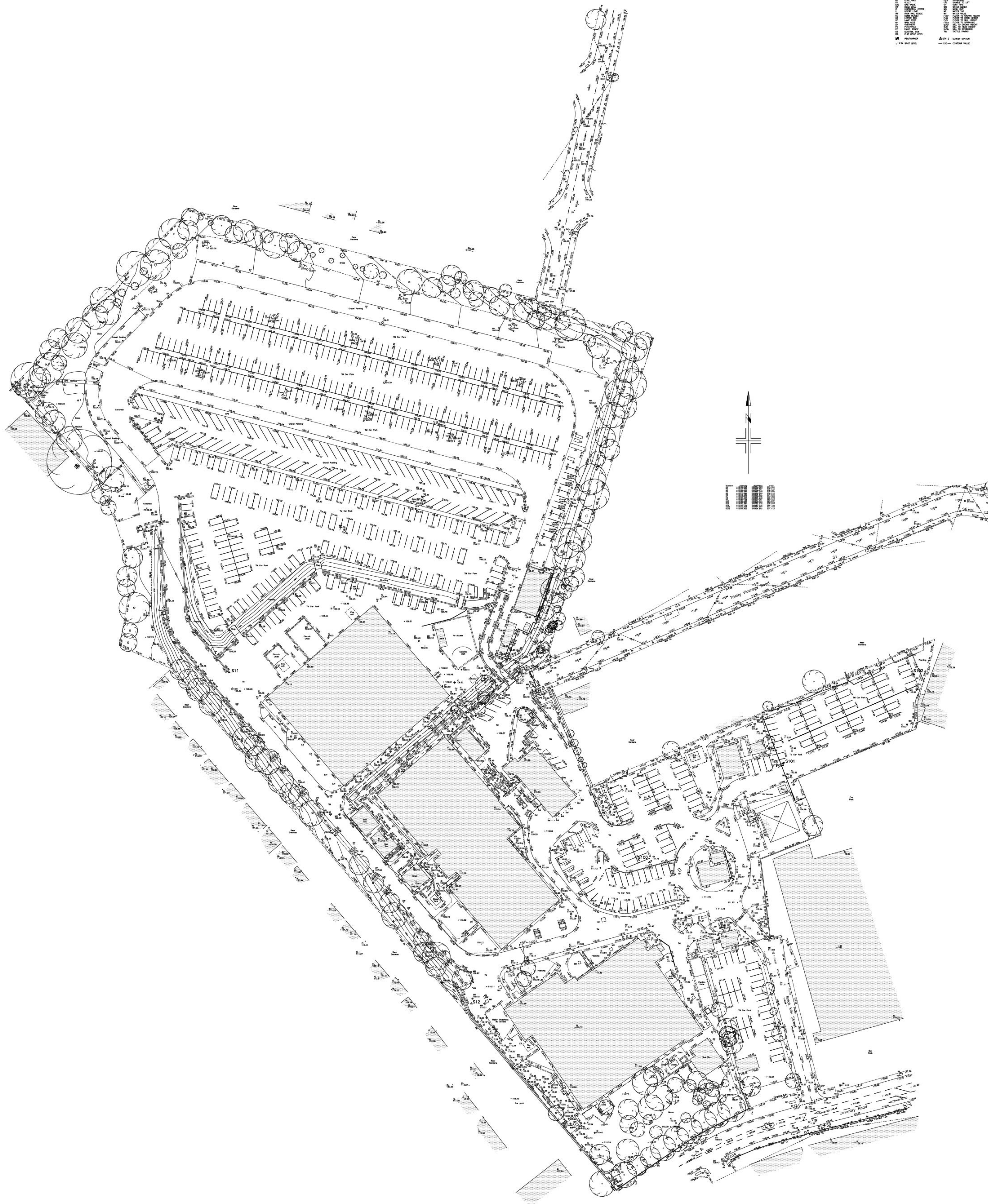
- 6.4 The existing site is largely impermeable, and the development will incorporate both increased permeable area and improved sustainable drainage, thus decreasing the infrastructure load in the wider area.
- 6.5 A reasonable approach in keeping with the Non-Statutory Technical Standards for SuDS is to restrict the runoff from the development to the existing rate less a reduction for betterment. Adopting this approach the development will require a total of 1,150m³ of storage to balance flows from the development.
- 6.6 The LLFA have expressed a desire to reduce the runoff from the development to greenfield rates. If this approach is adopted up to 2,100m³ of storage may be required.
- 6.7 The development is split into three natural catchments and the proportion of attenuation required for each catchment is discussed in the body of this document.



- 6.8 The developer is applying for outline consent only with all matters reserved. A detailed site layout is not available and detailed drainage layouts have therefore not been produced. However, a framework is presented in the body of this document setting out minimum storage and treatment options. The indicative layout included in Appendix B has allowed sufficient space for the key storage components. A two train SuDS drainage train will be employed for most of the development and additional source control measures including permeable paving, bio retention and roadside swales will be considered by the developer during the future detailed design.
- 6.9 There are existing STW on site and these sewers require an easement either side, with the main 525mm sewer requiring no building or trees within 5 metres and the smaller sewer requiring a similar easement 3m either side.
- 6.10 Foul drainage will be discharged to the public system. If the existing foul discharge routes are to be reflected, a pumping station will be required as the northern section of the proposed development will be at a lower level than the proposed discharge point at MH0802.
- 6.11 It is considered that the development can proceed without being at any significant flood risk and without increasing flood risk elsewhere. Assuming that the proposed recommendations are included in future detailed design, the development proposals are considered to represent **SUSTAINABLE DEVELOPMENT** from a flood risk and drainage perspective.

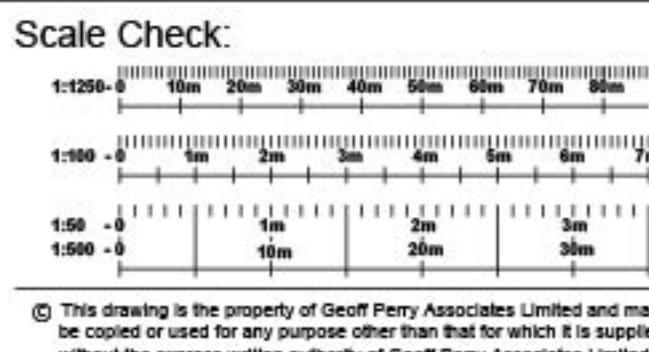
APPENDIX A

TOPOGRAPHICAL SURVEY

[illegible][illegible]

This survey has been oriented to the Ordnance Survey (O.S.) National Grid (OSGB35) via a Global Position System (GPS) and the O.S. Active Network (OS Net).
A true OSGB36 coordinate has been established near to the site centre via a transformation using the OSTN15 & OSGM15 transformation models. The survey has been established to this point and a further one or more OSGB36 points established to create a true O.S. bearing for angle orientation.
No scale factor has been applied to the survey therefore the coordinates shown are arbitrary and not true O.S. Coordinates which have a scale factor applied. Please refer to Survey Station Tables to enable establishment of the on-site grid. Physical features present in the vicinity of boundaries may not represent legally conveyed ownership. It should be noted that some features may

Revisions



Client: Fisher German LLP

Project: Cadent
Brick Kiln Street, Hinckley

Title: Topographical Survey
Sheet 1

Date: Oct 2020 Scale: 1:500 @ A0

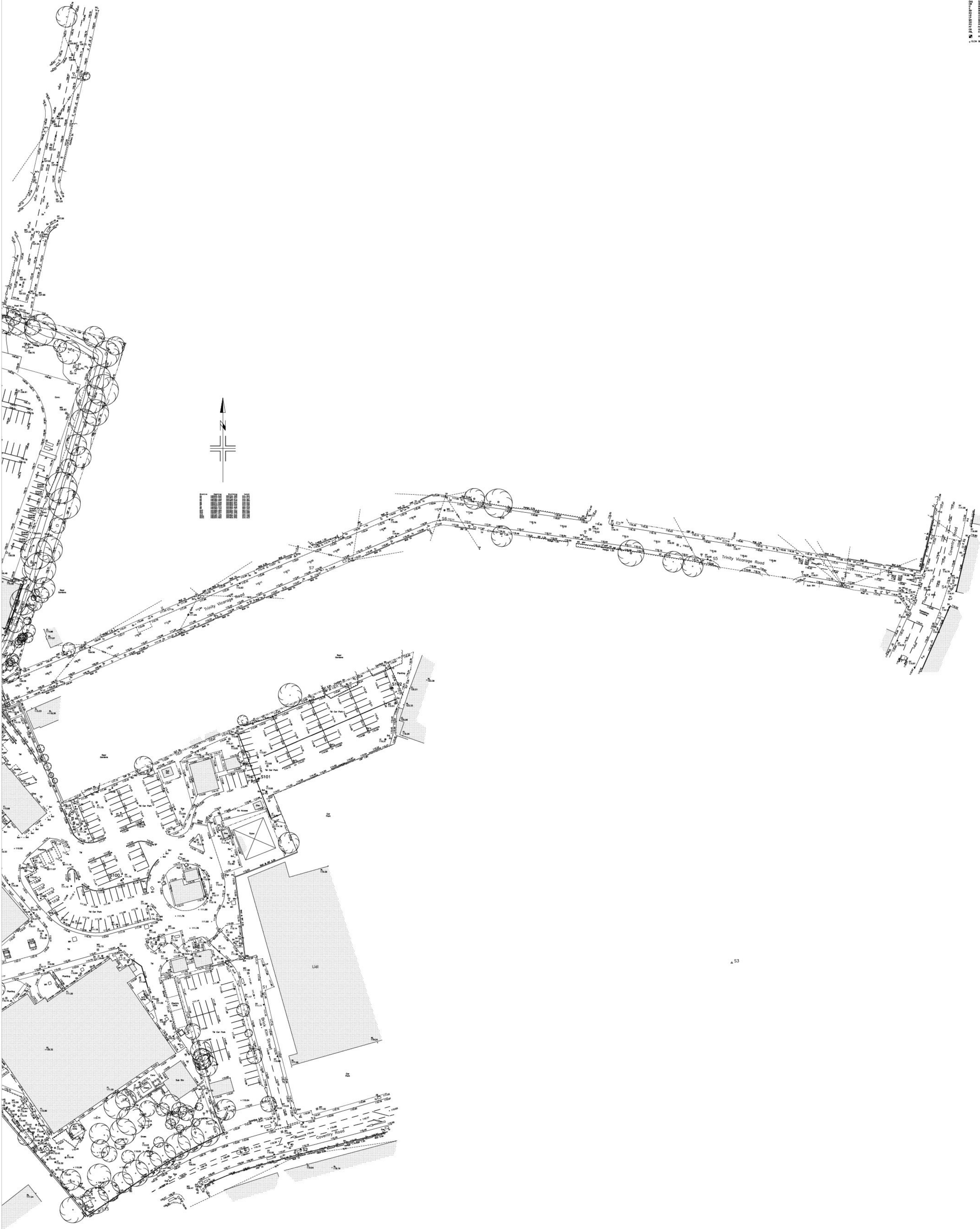
Drawn by: DW Checked by:

Job No.	Drg No.	Rev.
S219	1168	



**Geoff Perry
Associates Limited**
The Shrubbery, 28 Erdington Road,
Aldridge, Walsall, WS9 8UH
e : enquiries@geoffperryassoc.co.uk
t : 01922 744 900

STANDARD ABBREVIATIONS	
AC	Asphalt Concrete
AD	Asphalt Driveway
AE	Asphalt Embankment
AF	Asphalt Finish
AG	Asphalt Gravel
AH	Asphalt Haul
AI	Asphalt Inlet
AL	Asphalt Laid
AM	Asphalt Mastic
AN	Asphalt Noise
AO	Asphalt Overlay
AP	Asphalt Paving
AR	Asphalt Road
AS	Asphalt Surface
AT	Asphalt Treatment
AV	Asphalt Veneer
AW	Asphalt Water
AX	Asphalt X-ray
AY	Asphalt Yarn
AZ	Asphalt Zone
BA	Base Aggregate
BB	Base Bitumen
BC	Base Concrete
BD	Base Driveway
BE	Base Embankment
BF	Base Finish
BG	Base Gravel
BH	Base Haul
BI	Base Inlet
BL	Base Laid
BM	Base Mastic
BN	Base Noise
BO	Base Overlay
BP	Base Paving
BR	Base Road
BS	Base Surface
BT	Base Treatment
BV	Base Veneer
BW	Base Water
BX	Base X-ray
BY	Base Yarn
BZ	Base Zone
CA	Concrete Aggregate
CB	Concrete Bitumen
CC	Concrete Concrete
CD	Concrete Driveway
CE	Concrete Embankment
CF	Concrete Finish
CG	Concrete Gravel
CH	Concrete Haul
CI	Concrete Inlet
CL	Concrete Laid
CM	Concrete Mastic
CN	Concrete Noise
CO	Concrete Overlay
CP	Concrete Paving
CR	Concrete Road
CS	Concrete Surface
CT	Concrete Treatment
CV	Concrete Veneer
CW	Concrete Water
CX	Concrete X-ray
CY	Concrete Yarn
CZ	Concrete Zone
DA	Dam Aggregate
DB	Dam Bitumen
DC	Dam Concrete
DD	Dam Driveway
DE	Dam Embankment
DF	Dam Finish
DG	Dam Gravel
DH	Dam Haul
DI	Dam Inlet
DL	Dam Laid
DM	Dam Mastic
DN	Dam Noise
DO	Dam Overlay
DP	Dam Paving
DR	Dam Road
DS	Dam Surface
DT	Dam Treatment
DV	Dam Veneer
DW	Dam Water
DX	Dam X-ray
DY	Dam Yarn
DZ	Dam Zone
EA	Earth Aggregate
EB	Earth Bitumen
EC	Earth Concrete
ED	Earth Driveway
EE	Earth Embankment
EF	Earth Finish
EG	Earth Gravel
EH	Earth Haul
EI	Earth Inlet
EL	Earth Laid
EM	Earth Mastic
EN	Earth Noise
EO	Earth Overlay
EP	Earth Paving
ER	Earth Road
ES	Earth Surface
ET	Earth Treatment
EV	Earth Veneer
EW	Earth Water
EX	Earth X-ray
EY	Earth Yarn
EZ	Earth Zone
FA	Fabric Aggregate
FB	Fabric Bitumen
FC	Fabric Concrete
FD	Fabric Driveway
FE	Fabric Embankment
FF	Fabric Finish
FG	Fabric Gravel
FH	Fabric Haul
FI	Fabric Inlet
FL	Fabric Laid
FM	Fabric Mastic
FN	Fabric Noise
FO	Fabric Overlay
FP	Fabric Paving
FR	Fabric Road
FS	Fabric Surface
FT	Fabric Treatment
FV	Fabric Veneer
FW	Fabric Water
FX	Fabric X-ray
FY	Fabric Yarn
FZ	Fabric Zone
GA	Gravel Aggregate
GB	Gravel Bitumen
GC	Gravel Concrete
GD	Gravel Driveway
GE	Gravel Embankment
GF	Gravel Finish
GG	Gravel Gravel
GH	Gravel Haul
GI	Gravel Inlet
GL	Gravel Laid
GM	Gravel Mastic
GN	Gravel Noise
GO	Gravel Overlay
GP	Gravel Paving
GR	Gravel Road
GS	Gravel Surface
GT	Gravel Treatment
GV	Gravel Veneer
GW	Gravel Water
GX	Gravel X-ray
GY	Gravel Yarn
GZ	Gravel Zone
HA	Hard Aggregate
HB	Hard Bitumen
HC	Hard Concrete
HD	Hard Driveway
HE	Hard Embankment
HF	Hard Finish
HG	Hard Gravel
HH	Hard Haul
HI	Hard Inlet
HL	Hard Laid
HM	Hard Mastic
HN	Hard Noise
HO	Hard Overlay
HP	Hard Paving
HR	Hard Road
HS	Hard Surface
HT	Hard Treatment
HV	Hard Veneer
HW	Hard Water
HX	Hard X-ray
HY	Hard Yarn
HZ	Hard Zone
IA	Iron Aggregate
IB	Iron Bitumen
IC	Iron Concrete
ID	Iron Driveway
IE	Iron Embankment
IF	Iron Finish
IG	Iron Gravel
IH	Iron Haul
II	Iron Inlet
IL	Iron Laid
IM	Iron Mastic
IN	Iron Noise
IO	Iron Overlay
IP	Iron Paving
IR	Iron Road
IS	Iron Surface
IT	Iron Treatment
IV	Iron Veneer
IW	Iron Water
IX	Iron X-ray
IY	Iron Yarn
IZ	Iron Zone
JA	Joint Aggregate
JB	Joint Bitumen
JC	Joint Concrete
JD	Joint Driveway
JE	Joint Embankment
JF	Joint Finish
JG	Joint Gravel
JH	Joint Haul
JI	Joint Inlet
JL	Joint Laid
JM	Joint Mastic
JN	Joint Noise
JO	Joint Overlay
JP	Joint Paving
JR	Joint Road
JS	Joint Surface
JT	Joint Treatment
JV	Joint Veneer
JW	Joint Water
JX	Joint X-ray
JY	Joint Yarn
JZ	Joint Zone
KA	Kerf Aggregate
KB	Kerf Bitumen
KC	Kerf Concrete
KD	Kerf Driveway
KE	Kerf Embankment
KF	Kerf Finish
KG	Kerf Gravel
KH	Kerf Haul
KI	Kerf Inlet
KL	Kerf Laid
KM	Kerf Mastic
KN	Kerf Noise
KO	Kerf Overlay
KP	Kerf Paving
KR	Kerf Road
KS	Kerf Surface
KT	Kerf Treatment
KV	Kerf Veneer
KW	Kerf Water
KX	Kerf X-ray
KY	Kerf Yarn
KZ	Kerf Zone
LA	Lane Aggregate
LB	Lane Bitumen
LC	Lane Concrete
LD	Lane Driveway
LE	Lane Embankment
LF	Lane Finish
LG	Lane Gravel
LH	Lane Haul
LI	Lane Inlet
LL	Lane Laid
LM	Lane Mastic
LN	Lane Noise
LO	Lane Overlay
LP	Lane Paving
LR	Lane Road
LS	Lane Surface
LT	Lane Treatment
LV	Lane Veneer
LW	Lane Water
LX	Lane X-ray
LY	Lane Yarn
LZ	Lane Zone
MA	Mast Aggregate
MB	Mast Bitumen
MC	Mast Concrete
MD	Mast Driveway
ME	Mast Embankment
MF	Mast Finish
MG	Mast Gravel
MH	Mast Haul
MI	Mast Inlet
ML	Mast Laid
MM	Mast Mastic
MN	Mast Noise
MO	Mast Overlay
MP	Mast Paving
MR	Mast Road
MS	Mast Surface
MT	Mast Treatment
MV	Mast Veneer
MW	Mast Water
MX	Mast X-ray
MY	Mast Yarn
MZ	Mast Zone
NA	Nail Aggregate
NB	Nail Bitumen
NC	Nail Concrete
ND	Nail Driveway
NE	Nail Embankment
NF	Nail Finish
NG	Nail Gravel
NH	Nail Haul
NI	Nail Inlet
NL	Nail Laid
NM	Nail Mastic
NN	Nail Noise
NO	Nail Overlay
NP	Nail Paving
NR	Nail Road
NS	Nail Surface
NT	Nail Treatment
NV	Nail Veneer
NW	Nail Water
NX	Nail X-ray
NY	Nail Yarn
NZ	Nail Zone
OA	Open Aggregate
OB	Open Bitumen
OC	Open Concrete
OD	Open Driveway
OE	Open Embankment
OF	Open Finish
OG	Open Gravel
OH	Open Haul
OI	Open Inlet
OL	Open Laid
OM	Open Mastic
ON	Open Noise
OO	Open Overlay
OP	Open Paving
OR	Open Road
OS	Open Surface
OT	Open Treatment
OV	Open Veneer
OW	Open Water
OX	Open X-ray
OY	Open Yarn
OZ	Open Zone
PA	Pave Aggregate
PB	Pave Bitumen
PC	Pave Concrete
PD	Pave Driveway
PE	Pave Embankment
PF	Pave Finish
PG	Pave Gravel
PH	Pave Haul
PI	Pave Inlet
PL	Pave Laid
PM	Pave Mastic
PN	Pave Noise
PO	Pave Overlay
PP	Pave Paving
PR	Pave Road
PS	Pave Surface
PT	Pave Treatment
PV	Pave Veneer
PW	Pave Water
PX	Pave X-ray
PY	Pave Yarn
PZ	Pave Zone
QA	Quick Aggregate
QB	Quick Bitumen
QC	Quick Concrete
QD	Quick Driveway
QE	Quick Embankment
QF	Quick Finish
QG	Quick Gravel
QH	Quick Haul
QI	Quick Inlet
QL	Quick Laid
QM	Quick Mastic
QN	Quick Noise
QO	Quick Overlay
QP	Quick Paving
QR	Quick Road
QS	Quick Surface
QT	Quick Treatment
QV	Quick Veneer
QW	Quick Water
QX	Quick X-ray
QY	Quick Yarn
QZ	Quick Zone
RA	Rail Aggregate
RB	Rail Bitumen
RC	Rail Concrete
RD	Rail Driveway
RE	Rail Embankment
RF	Rail Finish
RG	Rail Gravel
RH	Rail Haul
RI	Rail Inlet
RL	Rail Laid
RM	Rail Mastic
RN	Rail Noise
RO	Rail Overlay
RP	Rail Paving
RR	Rail Road
RS	Rail Surface
RT	Rail Treatment
RV	Rail Veneer
RW	Rail Water
RX	Rail X-ray
RY	Rail Yarn
RZ	Rail Zone
SA	Sand Aggregate
SB	Sand Bitumen
SC	Sand Concrete
SD	Sand Driveway
SE	Sand Embankment
SF	Sand Finish
SG	Sand Gravel
SH	Sand Haul
SI	Sand Inlet
SL	Sand Laid
SM	Sand Mastic
SN	Sand Noise
SO	Sand Overlay
SP	Sand Paving
SR	Sand Road
SS	Sand Surface
ST	Sand Treatment
SV	Sand Veneer
SW	Sand Water
SX	Sand X-ray
SY	Sand Yarn
SZ	Sand Zone
TA	Tar Aggregate
TB	Tar Bitumen
TC	Tar Concrete
TD	Tar Driveway
TE	Tar Embankment
TF	Tar Finish
TG	Tar Gravel
TH	Tar Haul
TI	Tar Inlet
TL	Tar Laid
TM	Tar Mastic
TN	Tar Noise
TO	Tar Overlay
TP	Tar Paving
TR	Tar Road
TS	Tar Surface
TT	Tar Treatment
TV	Tar Veneer
TW	Tar Water
TX	Tar X-ray
TY	Tar Yarn
TZ	Tar Zone
UA	Urethane Aggregate
UB	Urethane Bitumen
UC	Urethane Concrete
UD	Urethane Driveway
UE	Urethane Embankment
UF	Urethane Finish
UG	Urethane Gravel
UH	Urethane Haul
UI	Urethane Inlet
UL	Urethane Laid
UM	Urethane Mastic
UN	Urethane Noise
UO	Urethane Overlay
UP	Urethane Paving
UR	Urethane Road
US	Urethane Surface
UT	Urethane Treatment
UV	Urethane Veneer
UW	Urethane Water
UX	Urethane X-ray
UY	Urethane Yarn
UZ	Urethane Zone
VA	Vinyl Aggregate
VB	Vinyl Bitumen
VC	Vinyl Concrete
VD	Vinyl Driveway
VE	Vinyl Embankment
VF	Vinyl Finish
VG	Vinyl Gravel
VH	Vinyl Haul
VI	Vinyl Inlet
VL	Vinyl Laid
VM	Vinyl Mastic
VN	Vinyl Noise
VO	Vinyl Overlay
VP	Vinyl Paving
VR	Vinyl Road
VS	Vinyl Surface
VT	Vinyl Treatment
VV	Vinyl Veneer
VW	Vinyl Water
VX	Vinyl X-ray
VY	Vinyl Yarn
VZ	Vinyl Zone
WA	Water Aggregate
WB	Water Bitumen
WC	Water Concrete
WD	Water Driveway
WE	Water Embankment
WF	Water Finish
WG	Water Gravel
WH	Water Haul
WI	Water Inlet
WL	Water Laid
WM	Water Mastic
WN	Water Noise
WO	Water Overlay
WP	Water Paving
WR	Water Road
WS	Water Surface
WT	Water Treatment
WV	Water Veneer
WW	Water Water
WX	Water X-ray
WY	Water Yarn
WZ	Water Zone
XA	X-ray Aggregate
XB	X-ray Bitumen
XC	X-ray Concrete
XD	X-ray Driveway
XE	X-ray Embankment
XF	X-ray Finish
XG	X-ray Gravel
XH	X-ray Haul
XI	X-ray Inlet
XL	X-ray Laid
XM	X-ray Mastic
XN	X-ray Noise
XO	X-ray Overlay
XP	X-ray Paving
XR	X-ray Road
XS	X-ray Surface
XT	X-ray Treatment
XV	X-ray Veneer
XW	X-ray Water
XX	X-ray X-ray
XY	X-ray Yarn
XZ	X-ray Zone
YA	Yarn Aggregate
YB	Yarn Bitumen
YC	Yarn Concrete
YD	Yarn Driveway
YE	Yarn Embankment
YF	Yarn Finish
YG	Yarn Gravel
YH	Yarn Haul
YI	Yarn Inlet
YL	Yarn Laid
YM	Yarn Mastic
YN	Yarn Noise
YO	Yarn Overlay
YP	Yarn Paving
YR	Yarn Road
YS	Yarn Surface
YT	Yarn Treatment
YV	Yarn Veneer
YW	Yarn Water
YX	Yarn X-ray
YY	Yarn Yarn
YZ	Yarn Zone
ZA	Zone Aggregate
ZB	Zone Bitumen
ZC	Zone Concrete
ZD	Zone Driveway
ZE	Zone Embankment
ZF	Zone Finish
ZG	Zone Gravel
ZH	Zone Haul
ZI	Zone Inlet
ZL	Zone Laid
ZM	Zone Mastic
ZN	Zone Noise
ZO	Zone Overlay
ZP	Zone Paving
ZR	Zone Road
ZS	Zone Surface
ZT	Zone Treatment
ZV	Zone Veneer
ZW	Zone Water
ZX	Zone X-ray
ZY	Zone Yarn
ZZ	Zone Zone

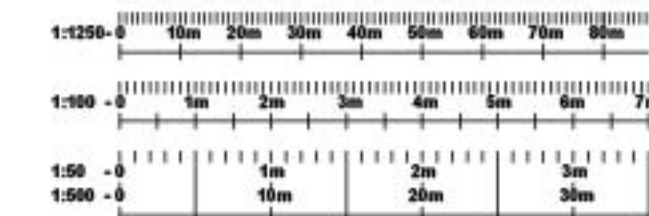


The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before work starts. The Contractor is to comply in all respects with current Building Legislation, British Standards Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other associated documentation provided. This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Each area of ground intended to support any structure (including drainage) must be investigated by the Contractor. A suitable method of foundation should be provided allowing for existing ground conditions. Any suspect or full ground, contaminated on or within the ground, should be further investigated by a suitable report. Any earthwork construction shown indicate local slopes for guidance only & should be further investigated by a suitable report. Where existing trees are to be retained they should be subject to a full Arboricultural Inspection for safety. All trees are to be planted so as to ensure they are a minimum of 6 metres from buildings and 3 metres from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. Geoff Perry Associates Limited do not accept any responsibility for any losses (financial or otherwise) to any Client or third party arising out of the Client's (or Developer or Contractor but not limited thereto) non-compliance with above mentioned provisions.

This survey has been oriented to the Ordnance Survey (O.S.) National Grid (OSGB36) via a Global Positioning System (GPS) and the O.S. Active Network (OS AN). A true (OSGB36) coordinate has been established near to the site centre via a transformation using the OSGB36 & OSAN15 transformation models. The survey has been converted to this point and a further one or more OSGB36 points established to create a true O.S. bearing for angle orientation. For each feature this value applied to the survey drawings the coordinates shown are arbitrary & not true O.S. Coordinates which have a scale factor applied. Please refer to Survey Station Table to enable establishment of the on-site grid. Physical features present in the vicinity of boundaries may not represent legally conveyed ownership. It should be noted that some features may have been obscured at time of survey. (Plotted area 50%).

Revisions:

Scale Check



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Client: Fisher German LLP

Project: Cadent
Brick Kiln Street, Hinckley

Title: Topographical Survey
Sheet 2

Date: Oct 2020 Scale: 1:500 @ A0

Drawn by: DW Checked by:

Job No. Drg No. Rev.
S219 1168

igp
SURVEYING

Geoff Perry Associates Limited
The Shrubbery, 28 Erdington Road,
Aston, Walsall, WS6 8LP
e: enquiries@geoffperryassoc.co.uk
t: 01922 744 900

APPENDIX B

PROPOSED LAYOUT

Land Off Brick Kiln St, Hinckley

ILLUSTRATIVE MASTERPLAN



0 | 10 | 20 | 30 | 40 | 50m

LEGEND

Site Allocation Boundary

Primary Movement Routes

Secondary Movement Routes

Shared/Private Drives

Proposed Attenuation

Indicative position of new tree planting

Proposed POS

Potential Site Access off Brick Kiln St

Potential Highway Emergency Link

Easement

Existing Mast

Proposed Development Structure

Existing Trees

LEGEND

Site Allocation Boundary

Primary Movement Routes

Secondary Movement Routes

Shared/Private Drives

Proposed Attenuation

Proposed Pedestrian/Cycle Route

Indicative position of new tree planting

Proposed Development Structure

Existing Trees

Proposed POS

Potential Highway Emergency Link

Easement

Existing Mast

TRINITY VICARAGE RD

PORTER CLOSE

COVENTRY RD

DGL Associates Limited
Barn Meadow House
Southfield Fold Farm
Southfield
Burnley
Lancashire
BB10 3RH

Tel : 01282 601157
Mbl : 07976 782876

Revision:		Checked
A	Drawn B.O'Sullivan	Approved
	Scale SEPT 2023	
	Drawn 1:1000@A2	
E-mail :	ben.dglia@gmail.com	

A2

Client	CADENT
Project	LAND OFF BRICK KILN ST, HINCKLEY
Drawing Title	ILLUSTRATIVE MASTERPLAN
Drawing No.	DGL_230929_5830.001



APPENDIX C

ENVIRONMENT AGENCY DATA

E-mail: kate.loewenthal@lumax-consulting.com

Our ref: 188336
Your ref:

Date: 9 October 2020

Dear Kate

Flood history for the land around Brick Kiln Street, Hinckley, LE10 0NA.

Thank you for your enquiry which was received on 5 October 2020.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004.

With regards to the history of flooding I can advise that we do not have any records of flooding in this area. It is possible that other flooding may have occurred that we do not have records for, and other organisations, such as the Lead Local Flood Authority or Internal Drainage Boards (where relevant), may have records.

Please refer to [Open Government Licence](#) which explains the permitted use of this information.

Please note:

- The information we supply does **not** provide an indicator of flood risk at an **individual property / site level**.
- This information relates to the area that the above named property is in and is not specific to the property itself as it is influenced by factors such as the height of door steps, air bricks or the height of surrounding walls. We do not have access to this information and is not currently used in our flood modelling.
- Our records on historic flooding can include flooding from groundwater.
- We log historic flooding where we have adequate records and do not have a record of all past flooding. If an area of land is shown outside the extent of recorded flooding it doesn't mean it has never flooded, simply that we don't hold a record of the area of land being flooded.

Flood Warning Service

Your property/site may be covered by the Environment Agency's Flood Warning Service. If you are unsure and/or you wish to register for this free service please contact Floodline on Tel no. 0345 988 1188 or 0845 988 1188.

You may also wish to contact your local authority or internal drainage board, to ask about surface water flooding or if they have other relevant local flood information.

Data Available Online

Many of our flood datasets are available online:

- Flood Map For Planning ([Flood Zone 2](#), [Flood Zone 3](#), [Flood Storage Areas](#), [Flood Defences](#), [Areas Benefiting from Defences](#))
- [Risk of Flooding from Rivers and Sea](#)
- [Historic Flood Map](#)
- [Current Flood Warnings](#)

Further details about the Environment Agency information supplied can be found on the GOV.UK 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 Flood Risk Assessments:

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

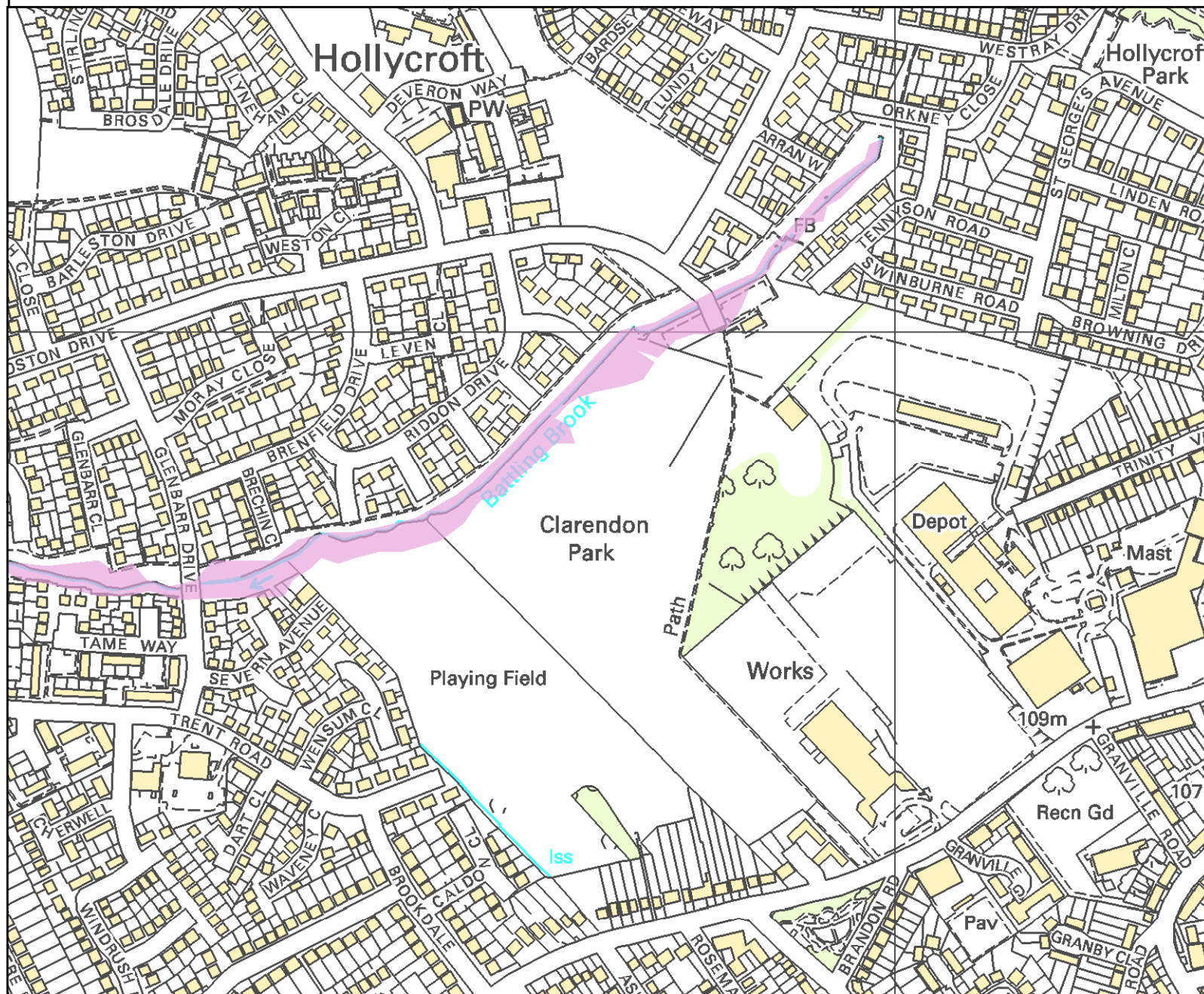
<https://www.gov.uk/government/publications/pre-planning-application-enquiry-form-preliminary-opinion>

Please get in touch if you have any further queries or contact us within two months if you'd like us to review the information we have sent.

Yours sincerely

Rachel Hamer
Customers & Engagement Officer
Team Tel No: 02084 747856.
E-mail: Enquiries_westmids@environment-agency.gov.uk

Flood Alert Area map, centred on Brick Kiln Street, Hinckley, created 15 January 2021



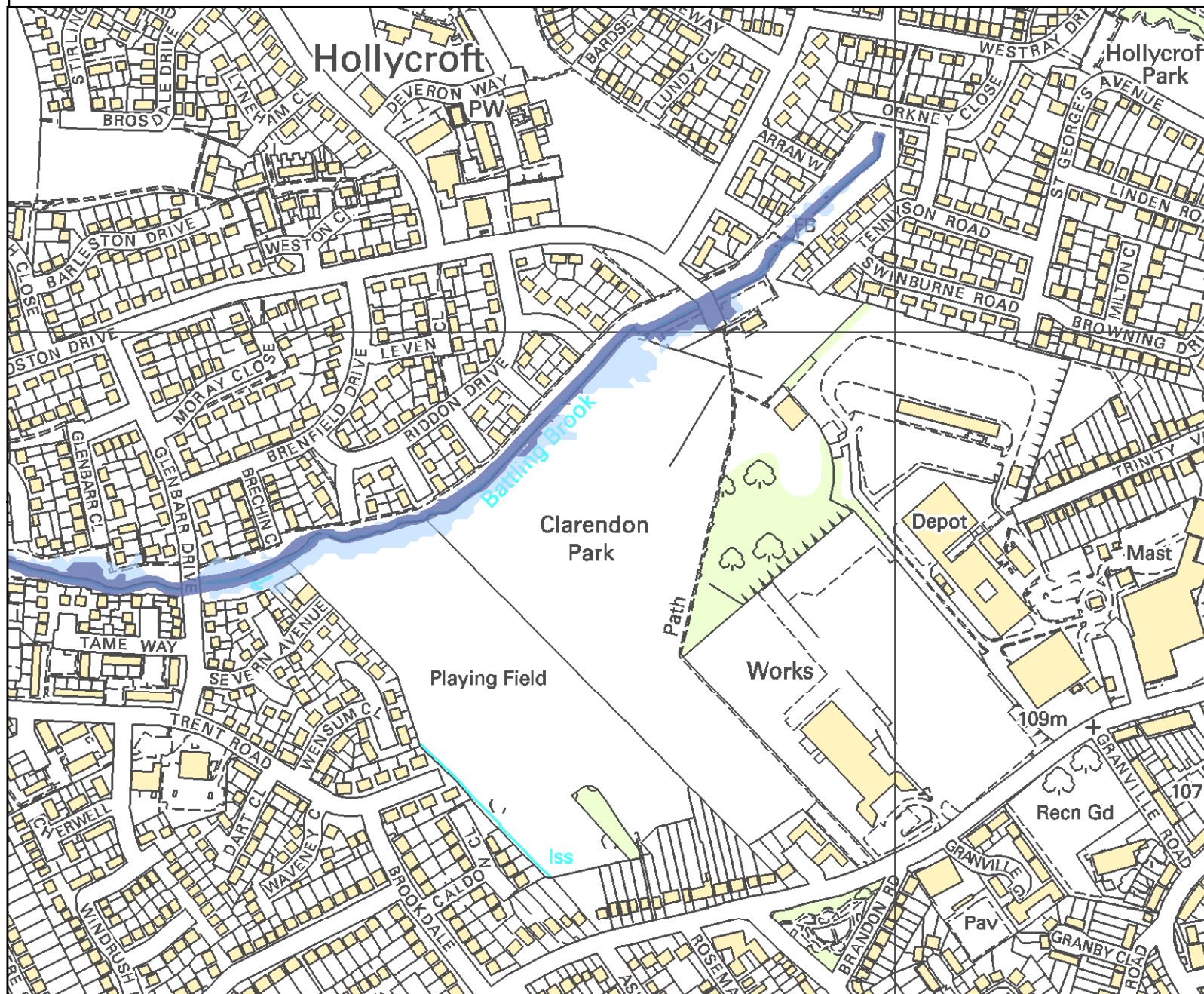
Legend

- Main Rivers
- Flood Alert Area

Scale 1:5,000



Flood Zone map, centred on Brick Kiln Street, Hinckley, created 15 January 2021



Legend

- Main Rivers
- Flood Zone 3
- Flood Zone 2

Flood Map Areas (assuming no defences)
 Flood Zone 3 shows the area that could be affected by flooding from a river with a 1 in 100 (1%) or greater chance of happening each year.
 Flood Zone 2 shows the extent of an extreme flood from rivers with up to a 1 in 1000 (0.1% - 1%) chance of occurring each year

Scale 1:5,000



Detailed Flood Risk Data for Brick Kiln Street, Hinckley

Reference number: 194411

Date of issue: 15 January 2021

Model Information

The following information and attached maps contain a summary of the modelled information relevant to the area of interest. The information provided is based on the best available data as of the date of issue.

Model Name	Release Date
Stour & Hinckley Tribs Flood Mapping Study	2013

The model can be downloaded from this link:

<https://ea.sharefile.com/d-s7fb7e4eb5104469aa129d5dc9509ca1b>

Flood Map for Planning (Rivers and Sea)

The Flood Map for Planning (Rivers and Sea) indicates the area at risk of flooding, **assuming no flood defences exist**, for a flood event with a 0.5% chance of occurring in any year for flooding from the sea, or a 1% chance of occurring in any year for fluvial (river) flooding (Flood Zone 3). It also shows the extent of the Extreme Flood Outlines (Flood Zone 2) which represents the extent of a flood event with a 0.1% chance of occurring in any year, or the highest recorded historic extent if greater. The Flood Zones refer to the land at risk of flooding and **do not** refer to individual properties. It is possible for properties to be built at a level above the floodplain but still fall within the risk area.

This Flood Map only indicates the extent and likelihood of flooding from rivers or the sea. It should also be remembered that flooding may occur from other sources such as surface water, sewers, road drainage, etc.

To find out which flood zone a location is in please use: <https://flood-map-for-planning.service.gov.uk/>

Definition of flood zones

- **Zone 1** - The area is within the lowest probability of flooding from rivers and the sea, where the chance of flooding in any one year is less than 0.1% (i.e. a 1000 to 1 chance).
- **Zone 2** - The area which falls between the extent of a flood with an annual probability of 0.1% (i.e. a 1000 to 1 chance) fluvial and tidal, or greatest recorded historic flood, whichever is greater, and the extent of a flood with an annual probability of 1% (i.e. a 100 to 1 chance) fluvial / 0.5% (i.e. a 200 to 1 chance) tidal. (Land shown in light blue on the Flood Map).
- **Zone 3** - The chance of flooding in any one year is greater than or equal to 1% (i.e. a 100 to 1 chance) for river flooding and greater than or equal to 0.5% (i.e. a 200 to 1 chance) for coastal and tidal flooding.

Note: The Flood Zones shown on the Environment Agency's Flood Map for Planning (Rivers and Sea) do not take account of the possible impacts of climate change and consequent changes in the future probability of flooding. Reference should therefore also be made to the [Strategic Flood Risk Assessment](#) when considering location and potential future flood risks to developments and land uses.

Node Data/ Modelled Levels

The attached map and spreadsheet will show a selection of 1D model node points near to your site.

Fluvial Flood Levels (m AOD)

The modelled levels are given in m AOD (N), m AOD indicates metres Above Ordnance Datum (Newlyn).

The information is taken from the model referenced above and does not include the updated climate change figures.

Climate Change

In February 2016 the '[Flood Risk Assessments: Climate Change Allowances](#)' were published on GOV.UK. This is in replacement of previous climate change allowances for planning applications. The data provided in this product does not include the new allowances. You will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding. The fluvial climate change factors are now more complex and a single uplift percentage across England cannot be justified.

The Environment Agency will incorporate the new allowances into future modelling studies. For now, it remains the applicant's responsibility to demonstrate through their proposal and flood risk assessments that new developments will be safe in flood risk terms for its lifetime.

Recorded Flood Outlines

Following examination of our records of historical flooding we have no record of flooding in the area. The absence of coverage for an area does not mean that the area has never flooded, only that we do not currently have records of flooding in this area. It is also possible that the pattern of flooding in this area has changed and that this area would now flood or not flood under different circumstances.

You may also wish to contact your Local Authority or Internal Drainage Board, to see if they have other relevant local flood information.

Planning development/s

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 Flood Risk Assessments. You can also request pre application advice:

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

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

Supporting Information

Surface Water

Managing the risk of flooding from surface water is the responsibility of Lead Local Flood Authorities. The 'risk of flooding from surface water' map has been produced by the Environment Agency on behalf of government, using information and input from Lead Local Flood Authorities.

You may wish to contact your Local Authority who may be able to provide further detailed information on surface water.

It is not possible to say for certain what the flood risk is but we use the best information available to provide an indication so that people can make informed choices about living with or managing the risks. The information we supply does not provide an indicator of flood risk at an individual site level. Further information can be found on the Agency's website:

<https://flood-warning-information.service.gov.uk/long-term-flood-risk>

Flood Alert & Flood Warning Area

We issue flood alert/warnings to specific areas when flooding is expected. If you receive a flood warning you should take immediate action.

Your site is near a Flood Alert Area. You can register online using the links below:

<https://www.gov.uk/check-flood-risk>

<https://www.gov.uk/sign-up-for-flood-warnings>

If you would prefer to register by telephone, or if you need help during the registration process, please call Floodline on 0345 988 1188.

The associated dataset for flood warning areas is available here:

<https://data.gov.uk/dataset/flood-warning-areas3>

The associated dataset for flood alert areas is available here: <https://data.gov.uk/dataset/flood-alert-areas2>

Flood Risk Activity Permits

We now consider applications for works, which may be Flood Risk Activities, under Environmental Permitting Regulations. This replaces the process of applying for a Flood Defence Consent. You may need an environmental Permit for flood risk activities 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

Please go to this website to find out more about how to apply:

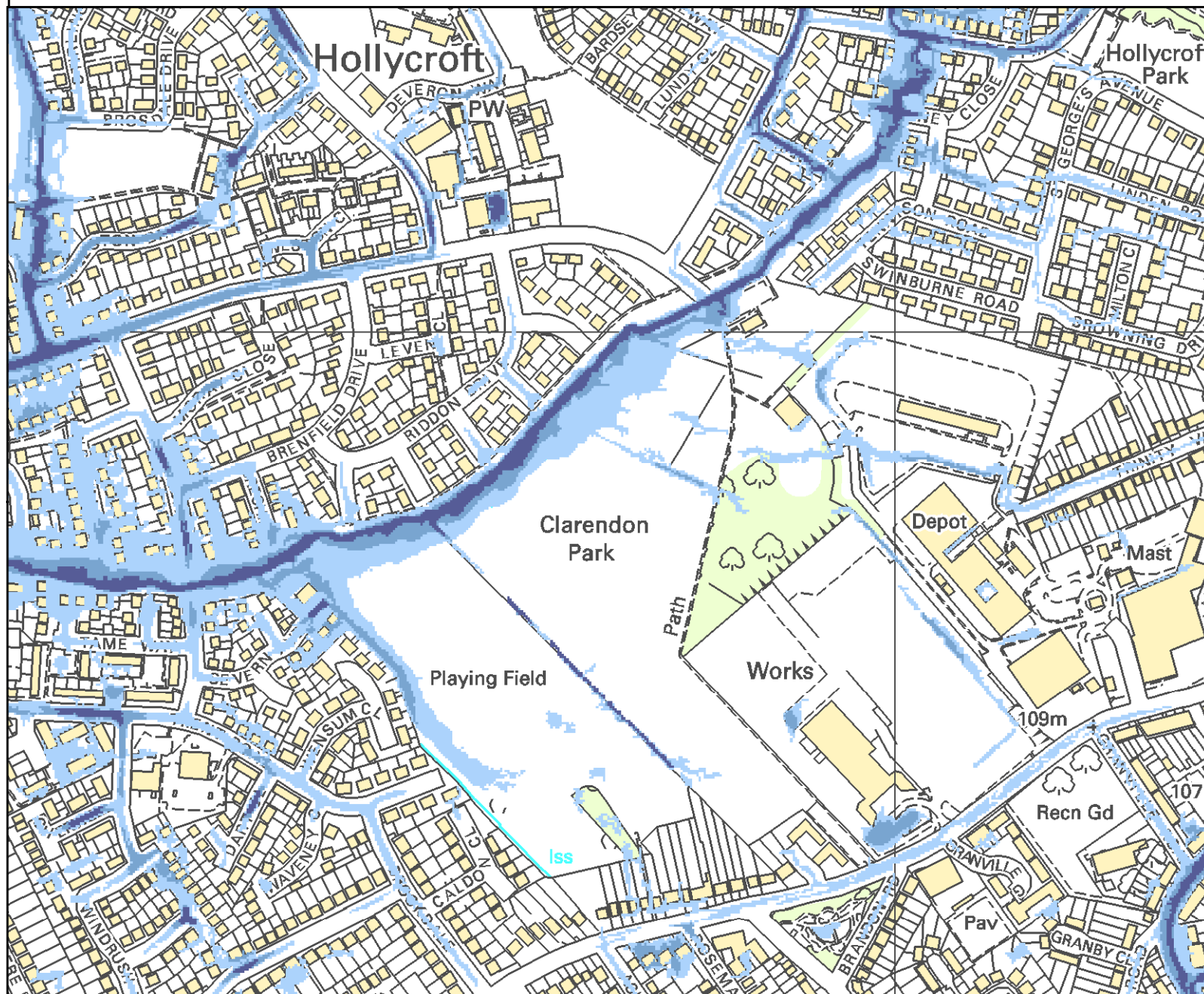
<https://www.gov.uk/guidance/flood-risk-activities-environmental-permits>.

Please be aware that Bespoke and Standard Rules permits can take up to 2 months to determine and will incur a charge.

Further details about the Environment Agency information supplied can be found on the GOV.UK website:

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

Surface Water flood map, centred on Brick Kiln Street, Hinckley, created 15 January 2021



Legend

- Main Rivers
- uFMfSW 1 in 30 flood extent
- uFMfSW 1 in 100 flood extent
- uFMfSW 1 in 1000 flood extent

Scale 1:5,000

