



FLOOD RISK ASSESSMENT

Dakota Hotel Manchester Airport

Reference

6338-JPG-XX-XX-RP-D-0620-S2-P02

Date

5 April 2024

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CONFIDENTIALITY STATEMENT

This report is addressed to and may be relied upon by the following:

Evans Dakota Hotels Limited
Millshaw
LEEDS
LS10 1AB

This report has been prepared for the sole use and reliance of the above-named party. This report shall not be relied upon or transferred to any other parties without the express written authorisation of JPG (Leeds) Limited. No responsibility will be accepted where this report is used, either in its entirety or in part, by any other party.

DOCUMENT HISTORY

Revision	Date	Revision Details	Status	Author(s)	Approved
P01	05.04.2024	First Revision	Information	BT	LB
P02	20.05.2024	Site plan updated	Information	BT	LB



1.0 INTRODUCTION

JPG (Leeds) Limited (JPG) has been instructed by Evans Dakota Hotels Limited to provide a flood risk assessment for a proposed hotel development off Enterprise Way immediately North East of Manchester Airport.

A new hotel and car park will replace the existing car park.

The report will review the flood risk issues associated with the proposed development and recommend any mitigation which should take place as part of the development.

A separate Drainage Impact Assessment Report will cover the detailed drainage strategy document reference 6338-JPG-XX-XX-RP-D-0621. This document should be read in conjunction with the Flood Risk Assessment Report.

This document is prepared in accordance with the requirements of and in response to the Planning Practice Guidance & National Planning Policy Framework (NPPF) which states that those proposing particular developments are responsible for:

- Providing an assessment of whether any proposed development is likely to be affected by flooding and whether it will increase the flood risk elsewhere and of the measures proposed to deal with these effects and risks; and
- Satisfying the local planning authority that any flood risk to the development or additional risk arising from the proposal will be successfully managed with the minimum environmental effect, to ensure that the site can be developed and occupied safely.

NPPF defines flood zones as follows:

- Zone 1 – Low Probability – less than 1 in 1000-annual probability (< 0.1%) of river or sea flooding in any year.
- Zone 2 – Medium Probability – between a 1 in 100 and 1 in 1000-annual probability (1% - 0.1%) of river flooding or between a 1 in 200 and 1 in 1000-annual probability of sea flooding (0.5% - 0.1%) in any year.
- Zone 3a – High Probability – 1 in 100 or greater annual probability (> 1%) of river flooding or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year.
- Zone 3b – Functional Floodplain – 1 in 20 or greater annual probability (5%) of river flooding in any year. This is land on which water must flow or be stored in times of flood.

A Flood Risk Assessment is required for all sites in excess of 1ha within Zone 1 and all sites within Zones 2 and 3.



2.0 THE SITE

2.1 Location

The site is located to the East of Junction 5 of the M56, approximately 500m to the North East of Terminal 2, Manchester Airport. The approximate centre of the site is located at NGR 381961 386038.

A site location plan is provided as Figure 1 in Appendix A.

2.2 Site Description and Topography

The site has an area of approximately 1.22 hectares (ha) and comprises an irregular shaped relatively level parcel of land. It measures approximately 110m along its North to South axis and 140m along its East to West axis. Vehicular access to the site is off Bailey Lane from the North West.

Most of the site is covered with crushed stone, with smaller areas of concrete hardstanding.

A shallow embankment, approximately 2m high, runs along the South-Eastern, South Western and North Western boundaries of the site.

Mature and semi-mature trees are located along the North Eastern boundary of the site.

Most of site is bound by a wooden fence, except for the entrance off Bailey Lane which comprises herras fencing secured with a combination lock. An additional fence/gate with a combination lock is located inside the site, close to the entrance off Bailey Lane.

A water house (wooden box) and water tap (live) were noted in the Northern part of the site.

Bailey Lane is located immediately beyond the North Western boundary beyond which are units occupied by the Razorblue Group and Etrop Grange Hotel. Woodland and houses are located beyond the site to the North East. A roundabout is located beyond the site to the South East and Enterprise Way is beyond the site to the South West.

Land beyond Enterprise Way to the South West and to the West beyond Bailey Lane are currently under construction.



3.0 EXISTING DRAINAGE NETWORK

3.1 Watercourses and Land Drainage

There is an open watercourse located on the Eastern boundary of the development, this is culverted both upstream and downstream of the development boundary.

This watercourse will be the surface water outfall for the development.

3.2 Public Sewer Network

Public sewer records have been obtained from United Utilities (UU) and indicate public sewer assets outside of the boundary in the Bailey Lane and Hilary Road junction.

Based on the United Utilities record drawing there is a public combined water sewer detailed below, there are no adopted surface water sewer in the vicinity of the site.

- 300dia. Foul Water Public Sewer (material vitrified clay).

The law regarding responsibility for drains and sewers changed on the 1 October 2011. From this date the Government transferred the majority of drainage pipes that are either outside a property's boundary or are shared with other buildings to the Sewage/Water companies. The sewer records may not show all of the transferred sewers.

A United Utilities sewer record plan is provided in Appendix C.

3.3 Private Drainage Systems/Network

There is an existing foul water existing drainage system which serves future developments sites along Enterprise Way, this has eventual outfall into the adopted combined sewer in Bailey Lane/Hilary Road.

The sewers are owned and maintained by the Manchester Airport Group.

A private drainage layout plan is located in Appendix C.

This private drainage network will be the foul water outfall for the development.

4.0 DEVELOPMENT PROPOSALS

The proposed development comprises a seven-story hotel building with associated car parking, electrical charging points, service yard and landscaping.

A plan of the proposed development has been provided by the architect. This is referenced below, and a copy is provided in Appendix D.



KPP Architects. 1031 PROPOSED SITE LAYOUT APR'24. Dakota Manchester Airport.
Dated April 2024.

5.0 FLOOD RISK ASSESSMENT

Flooding information was obtained from the Environment Agency (EA) website, which confirms the site lies within Flood Zone 1.

The Environment Agency Flood Mapping for surface water is in Appendix E.

Flood Zone 1 comprises land assessed as at a low risk of flooding from a watercourse and/or sea with less than a 1:1000-annual probability of river or sea flooding.

NPPF Technical Guidance states that all type of development is appropriate in Flood Zone 1.

NPPF Technical Guidance states that flood risk should be considered from all sources, including:

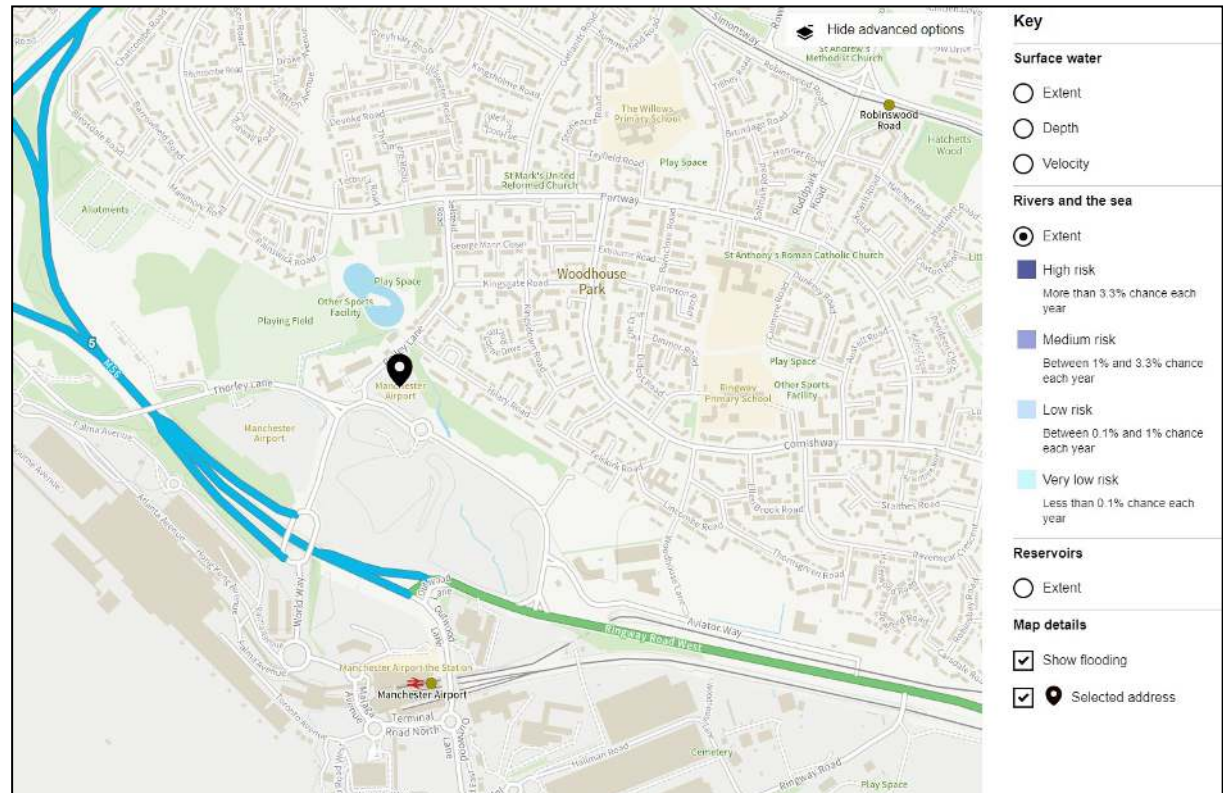
- Rivers and sea (Fluvial).
- Adjoining land (Pluvial).
- Groundwater.
- Flooding from sewers and drains.
- Flooding from reservoirs, canals and other artificial sources.



5.1 Flooding from Rivers and Sea (Fluvial)

The site is located in an elevated position in relation to the water course on the Eastern boundary.

A copy of the map produced by the Environment Agency showing the extent of flooding from rivers and the sea is below.



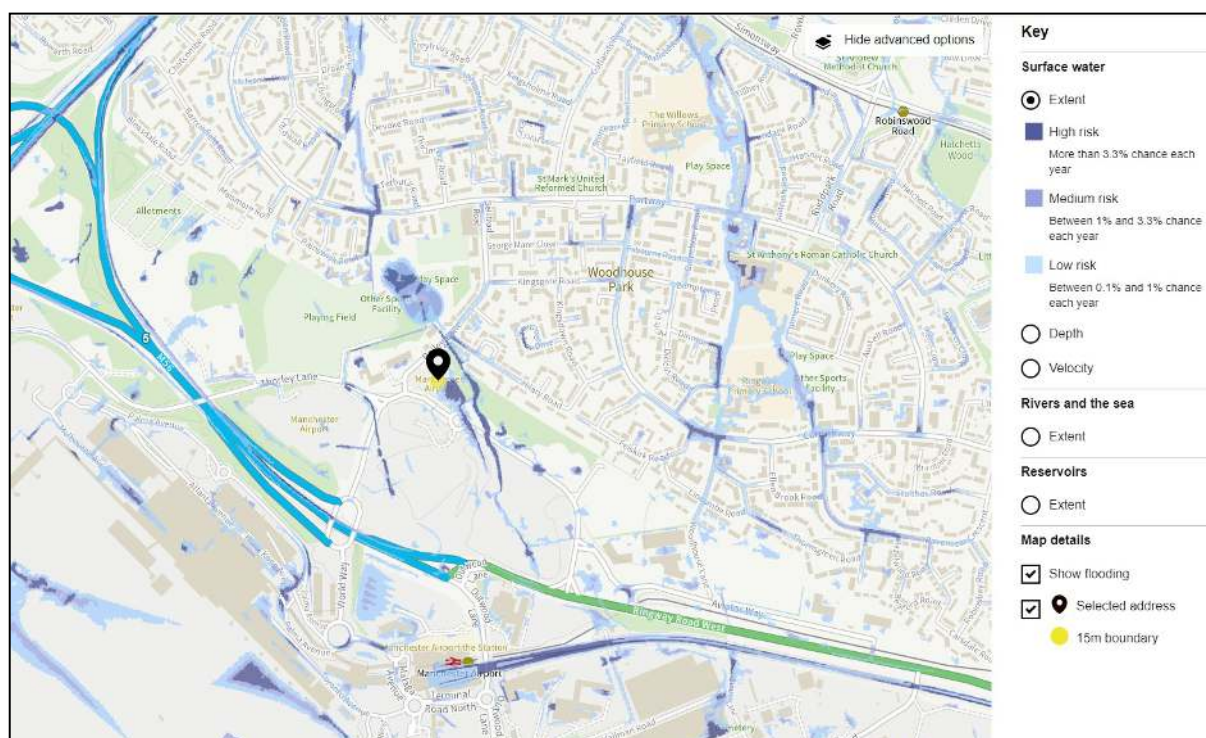
The risk to the development from this potential flooding source is considered to be low.



5.2 Flooding from Adjoining Land (Pluvial)

Overland flow/surface water flooding typically arises because of intense rainfall, often for a short duration. This is unable to soak into the ground or enter drainage systems. It can run quickly off land and result in localised flooding.

A copy of the map produced by the Environment Agency showing the extent of flooding from surface sources is below.



As indicated on the above Environment Agency flood map the majority of the proposed site is at low risk.

There is a small area of medium to high-risk surface flooding indicated on the mapping along the Eastern boundary. The levels along this boundary are considerably lower than the proposed levels and as such risk from overland flows is unlikely.

Based on the above assessment the risk to the development from this potential flooding source is considered to be low.



5.3 Flooding from Groundwater

From a review of the Manchester City, Salford City and Trafford Councils Level 1 SFRA the risk of flooding from groundwater is described as:

"According to Greater Manchester sub-regional SFRA there are no known reports of groundwater flooding in the Manchester, Trafford and Salford authorities. However, a number of areas within Trafford appear to suffer from a high water table or standing water

(Map 2.1):

- *Stamford Brook Development.*
- *South of Edge Lane, Stretford.*
- *Areas of Timperley in the vicinity of Heyes Lane and Fairywell Brook."*

As none of the areas identified are in close proximity to the proposed development location the overall risk to the development from this potential flooding source is considered to be low.

5.4 Flooding from Sewers and Drains

There are off site existing private drains to the South and West of the site, they are maintained by the current owner, Manchester Airport Group.

As part of the proposed development a "Drainage Maintenance and Management Plan" 6338-JPG-XX-XX-RP-D-0622 has been produced and will detail the ongoing maintenance for the on-site private drainage.

Public sewers in the locality are maintained by United Utilities and will be subject to regular inspection and maintenance as part of their asset management programme, therefore blockage of these sewers is unlikely.

Copies of the private plot drainage and public sewer record drawings are located in Appendix C.

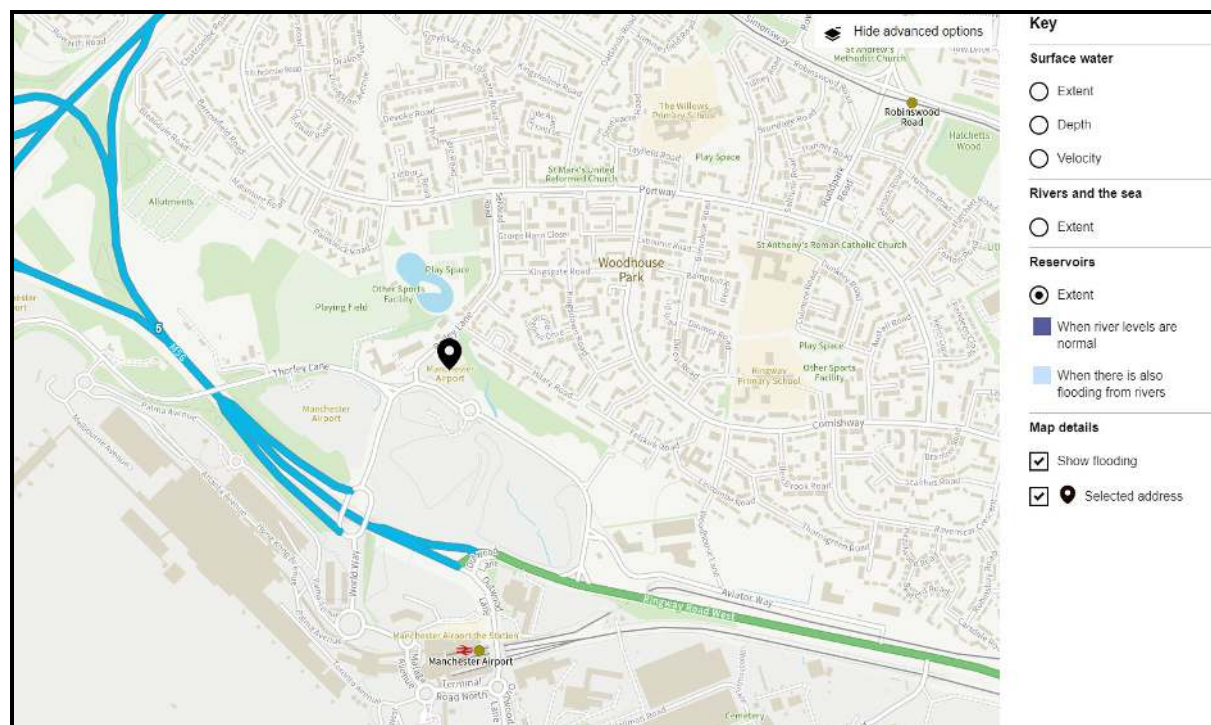
The overall risk to the development from this potential flooding source is considered to be low.



5.5 Flooding from Reservoirs, Canals and Other Artificial Sources

Review of the Environment Agency flood risk mapping from reservoirs shows that the site is not in an area at risk from failure of a reservoir or other artificial source.

A copy of the map produced by the Environment Agency showing the extent of flooding from reservoirs and other artificial sources is below.



This risk to the development from this potential flooding source is considered to be low.

6.0 CONCLUSIONS

This assessment has looked at the flood risk issues to support a planning application for the development of a hotel off Enterprise Way immediately North East of Manchester Airport.

This report shall be read in conjunction with the Drainage Impact Assessment report 6338-JPG-XX-XX-RP-D-0621 which contains the detailed drainage design and calculations.

This report shall also be read in conjunction with the Drainage Maintenance and Management Plan 6338-JPG-XX-XX-RP-D-0622 which recommend drainage maintenance activities and schedule.

The site is located within Flood Zone 1 and NPPF Technical Guidance states that industrial/commercial uses are considered less vulnerable in terms of flood risk and are appropriate in Flood Zone 1.



This report has considered all potential sources of flood risk at the site and can conclude that these are considered low from all sources.

Overall, this report demonstrates that flood risk to the development is considered to be low.



Appendix A Site Location Plan





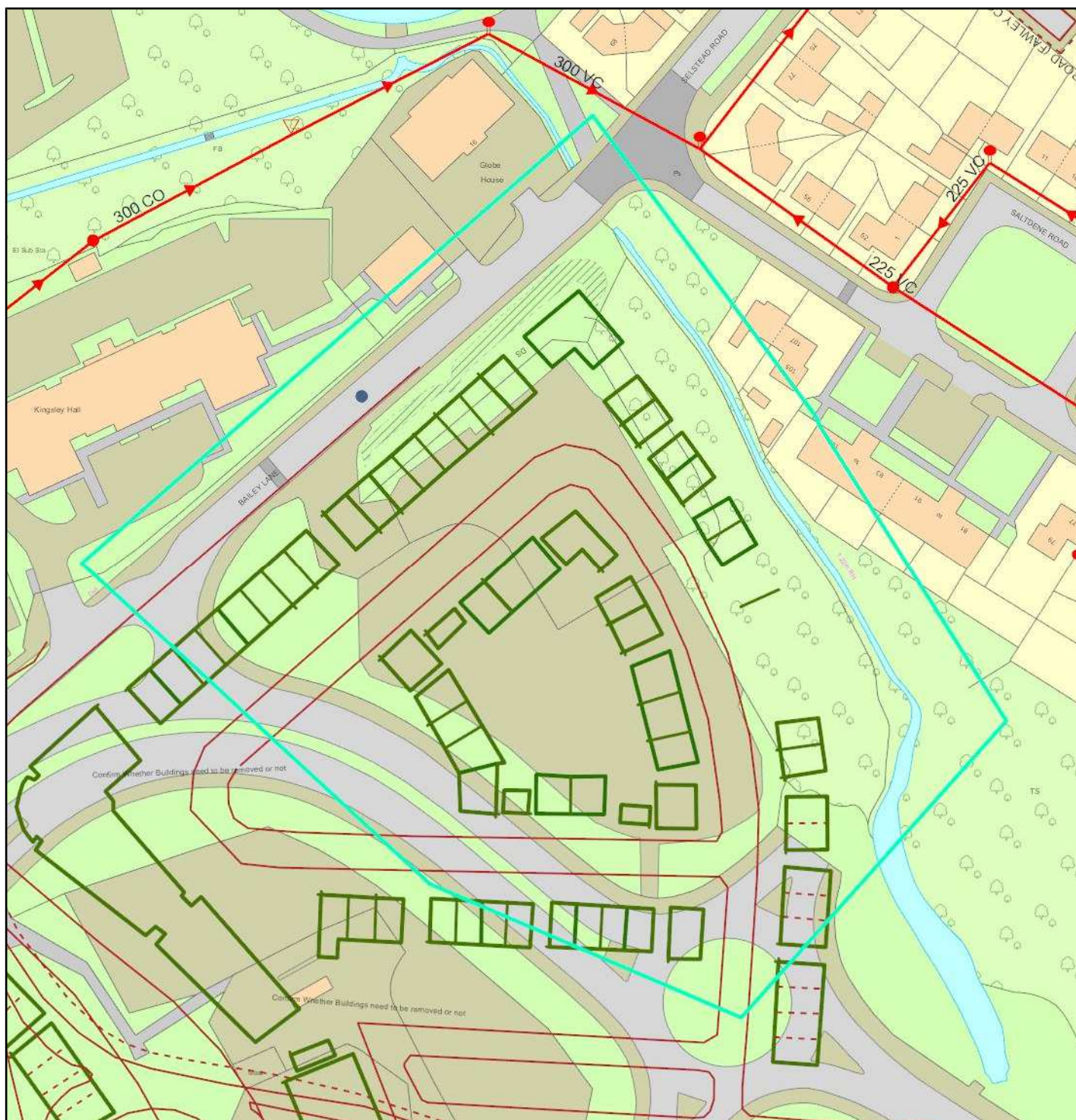
Appendix B Topographic Survey



Appendix C Existing Private Drainage & Public Sewer Record Plans

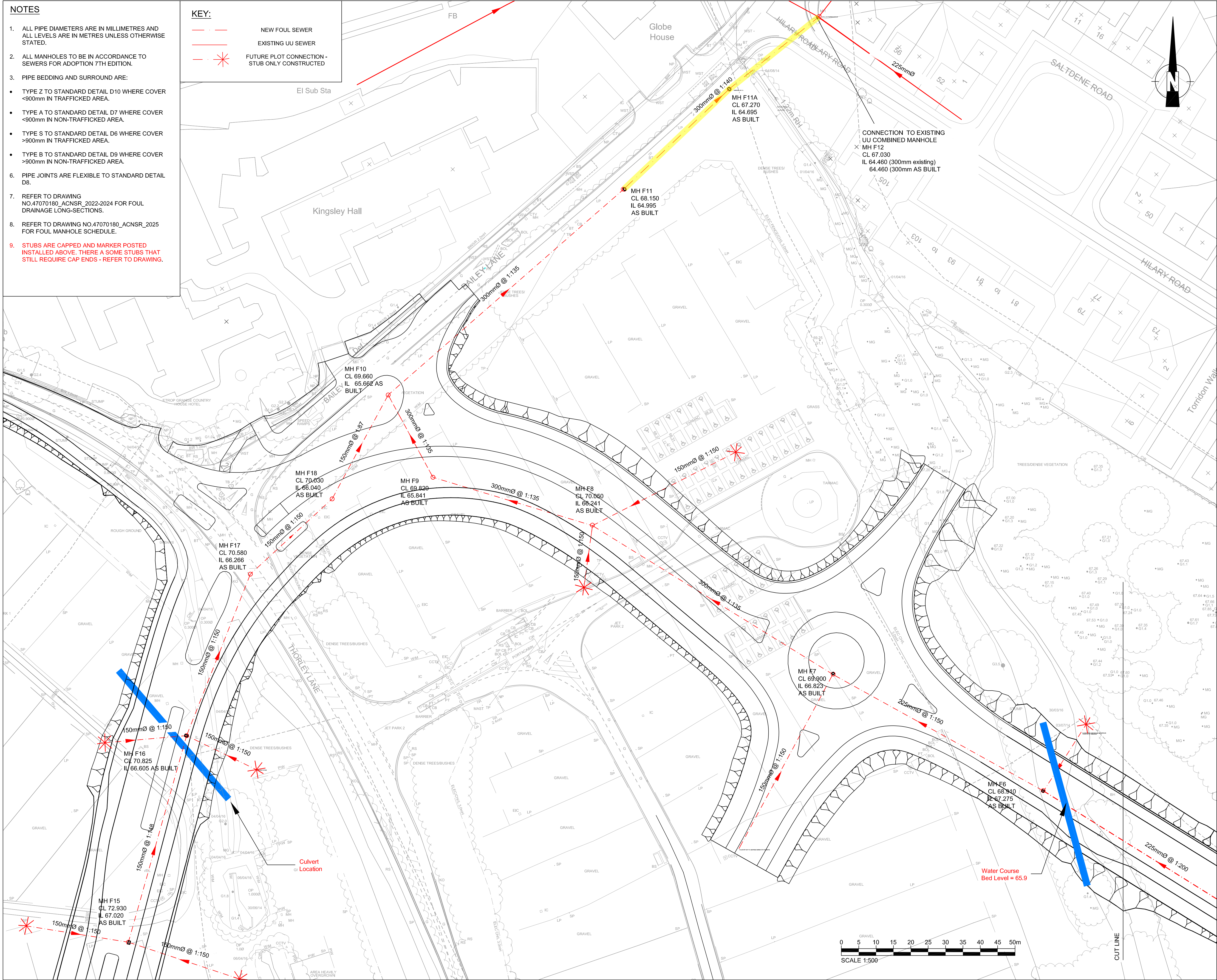
SEWER RECORD

Site off Bailey Lane



The position of underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. The actual positions may be different from those shown on the plan and private pipes, sewers or drains may not be recorded. United Utilities Water PLC will not accept any liability for any damage caused by the actual positions being different from those shown.

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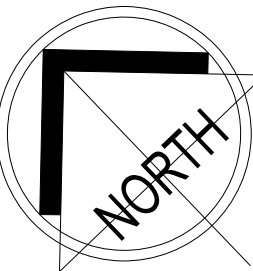
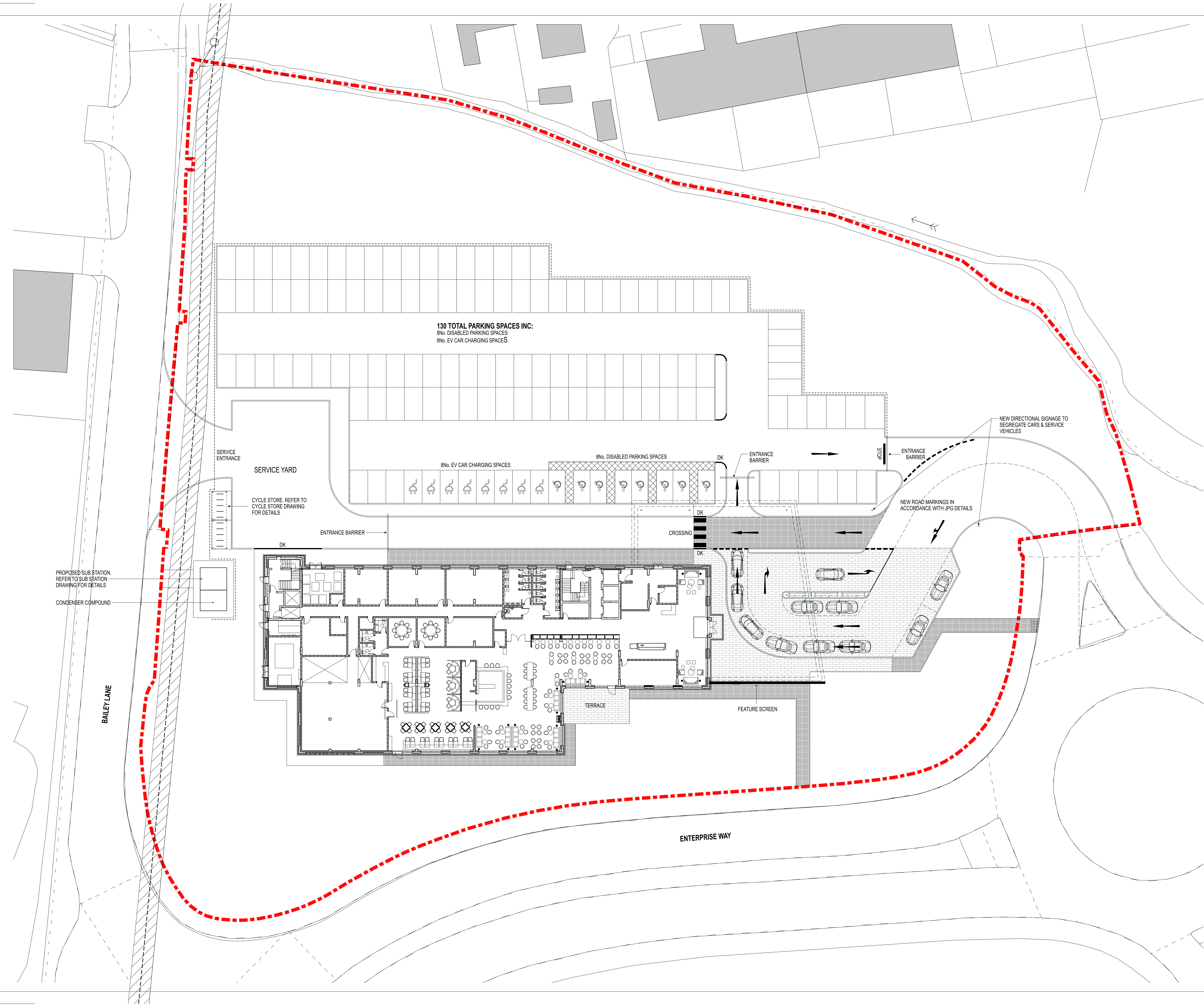


AB1	23/04/18	AS BUILT
I/R	DATE	DESCRIPTION



Appendix D Proposed Site Layout Plan

Notes:
This drawing is the sole copyright of KPP Architects Ltd and reproduction in any form is forbidden unless permission is obtained in writing.
Do not scale from this drawing. Any discrepancies on site should be brought to the attention of KPP Architects Ltd.
Work and materials must comply with the current building regulations and codes of practice and be read in conjunction with building specifications and other sub-contractors information. All materials are to be installed in strict accordance with the recommendations of the manufacturers.



Rev	Description	By	Chkd	Date

Client

Project Title
**DAKOTA HOTEL
LAND OFF ENTERPRISE WAY
WYTHENSHAW**

Drawing Title
PROPOSED SITE PLAN

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Scale	Size	Date	Drawn	Checked
1:250	A1	MAY '24	JH	.
Status	PRELIMINARY			
KPP Job No	2019-08			Rev
Number	3001			P1



Appendix E Environment Agency Flood Mapping

Flood map for planning

Your reference
<Unspecified>

Location (easting/northing)
381948/386039

Created
3 Apr 2024 8:28

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

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

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

Notes

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

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

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

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Flood map for planning

Your reference
<Unspecified>

Location (easting/northing)
381948/386039

Scale
1:2500

Created
3 Apr 2024 8:28

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


0 20 40 60m

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