



FLOOD RISK & DRAINAGE STATEMENT

Former Wastewater Treatment Works North Bierley Oakenshaw

Reference	5414-JPG-XX-XX-RP-D-0622-S2-P01
Date	September 2026
Author	BT

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CONFIDENTIALITY STATEMENT

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

Bond It Group
Lowfields Business Park
Elland
HX5 9DN

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	25.09.2026	First Revision	Preliminary	BT	BT



1.0 INTRODUCTION

JPG (Leeds) Limited (JPG) has been instructed by Bond It Group to prepare a Flood Risk and Drainage Statement for a planning application for the construction of two industrial units at the Former Wastewater Treatment Works, North Bierley, Oakenshaw.

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

This document is prepared in accordance with the requirements of, and in response to, the National Planning Policy Framework (NPPF) and the National Planning Policy Guidance (NPPG), 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, 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.

NPPG 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 directly to the north of the M62 (Junction 26), to the west of the M606 (Junction 1) and approximately 6km to the south of Bradford city centre. The approximate centre of the site is located at national grid reference (NGR) 418114, 427087.

A location plan is provided in Appendix A.

2.2 Site Description and Topography

A site walkover was carried out by a JPG engineer on 16 September 2026.

The site comprises an irregular shaped parcel of land, measuring approximately 330m along its north to south axis and 85m along its east to west axis, occupying an overall area of approximately 3.05 hectares.

The northern part of the site comprises four former filter beds, one empty, one partially empty and two full of gravel and cobbles of suspected slag/clinker. A concrete plinth with metal infrastructure is located at the northern end of the filter beds in the centre, at the former location of above ground storage tanks.

The southern end of the site is fenced off with palisade fencing, trending east in west in the central part of the site, and a locked gate. A stockpile is shown adjacent to the southern boundary, comprising grass and semi-mature vegetation. The remainder of the southern area is low lying, comprising grass with overgrown areas of semi-mature vegetation.

Access to site is gained off Interchange Way from the northwestern corner of the site. Concrete blocks and two metal bollards are positioned at the entrance onto site.

Overhead electricity cables are located 25m to the north of the site, trending east to west.

The site is bound to the north by a gravel path, beyond which is Advanced Supply Change Group and to the east by gravel path, pumping station and Hunsworth Beck, beyond which is open fields. The site is bound to the south by M62 motorway and slip road and to the west by a metal palisade fencing and grassland, beyond which the M606 motorway and slip road.

2.3 Watercourses and Drainage

The closest surface water feature is an inland river (not influenced by normal tidal action) located in the northern part of the site, trending south east to north west. Hunsworth Beck is located 24m to the north east of the site, flowing north to south.



The site has an existing privately managed surface water and foul water drainage network, details of this drainage can be found in Appendix B.

2.4 Planning History

The wider site was developed under outline planning application 2016/60/92298/E in 2016. A reserved matters application 2021/61/91932/E was submitted for the construction of two industrial units in 2021. The two units which formed part of the application were subsequently constructed.

Further reserved matters applications 2020/61/91488/E and 2020/61/91807/E were submitted in 2020 for the construction of one industrial unit. This unit was subsequently constructed.

The final plot being the subject of this report received outline planning approval under application 2021/60/94208/E in October 2023. Relevant reports supporting the application are:

- Flood Risk Assessment & Drainage Strategy written by Civic Engineers in 2021, reference "1926-01-CIV-XX-XX-RP-C-0001-North Bierley-FRA & DS".
- Supplementary FRA report by Civic Engineers dated 2 March 2022, reference "1926 – North Bierley – Letter to EA".

As part of this outline approval the following condition was included in the consent:

The development shall be carried out in accordance with the submitted flood risk assessment 'Flood Risk Statement and Drainage Strategy – 1926 North Bierley' produced by Civic Engineers dated 27 October 2021, the supplementary FRA report by Civic Engineers dated 2 March 2022, reference '1926 – North Bierley – Letter to EA', drawing ref. 1926-CIV-XX-XX-GA-C-00001 revision P02 dated Jan 2022, and the following mitigation measures they detail:

- Finished floor levels shall be set no lower than 92.0m AOD, as detailed in sections 2 and 3 of the supplementary FRA.
- No development shall take place within flood zone 3 as shown on drawing 1926-CIV-XX-XX-GA-C-00001 revision P02 dated Jan 2022.

3.0 DEVELOPMENT PROPOSALS

It is proposed to redevelop the site for commercial end use. A proposed site plan is referenced below, and a copy is provided in Appendix C.

- KPP Architects. Interchange 26, Interchange Way, Bradford. Proposed Site Plan. Drawing Ref: ICB-KPP-ZZ-DR-A-GA- 2002. Dated July 2026, for Bond It Group.



4.0 FLOOD RISK ASSESSMENT

The site benefits from an outline planning consent, application ref 2021/60/94208/E in October 2023, within this application the following report was approved:

- 1926-01-CIV-XX-XX-RP-C-0001-North Bierley-FRA & DS (Flood Risk Assessment & Drainage Strategy) written by Civic Engineers in 2021.
- Supplementary FRA report by Civic Engineers dated 2 March 2022, reference "1926 – North Bierley – Letter to EA".

These reports conclude that the development is located in Flood Zone 1 with localised areas close to Hunsworth Beck identified as being in Flood Zone 2 & 3 and is within the low-risk area for river, sea, surface water and reservoir flooding. There are some localised low spot areas of high risk of surface water flooding which will be designed out at as part of the detailed levels exercise.

From the evidence collated, the Summary of flood risk to the site is as follows:

Rivers and Sea –Low Risk
Reservoir – Low Risk
Groundwater – Medium Risk
Public Sewers – Low Risk
Surface Water – Low Risk

The development can be implemented safely from a flood risk perspective so long as there is compliance with the conditions of the outline planning approval and the FFL's are set at a minimum level of 92.0m AOD.

Appendix D displays the preliminary levels scheme, demonstrating compliance with this condition.



5.0 DRAINAGE ASSESSMENT

5.1 Surface Water Drainage

Requirement H3 of the Building Regulations establishes a preferred hierarchy for the disposal of surface water. Consideration should firstly be given to soakaway, infiltration, watercourse, and sewer in that priority order.

Infiltration was ruled out on the basis of the clayey natural strata and potential contamination pathway risks to groundwater due to a relatively high watertable in some areas of the site.

In line with the approved documents of the outline approval, discharge to Hunsworth Beck is proposed.

5.2 Run off and Restricted Discharge

As set out the approved documents of the outline approval, discharge to Hunsworth Beck has been agreed at a greenfield run off rate of 5 l/s/ha by the LLFA.

Based on the proposed site area displayed in the proposed impermeable area plan (Appendix E), surface water discharge is proposed at 10.65 l/s.

For all Major development, to minimise any increase in flood volumes off site, the peak flow rate shall be capped at Q_{bar} to conform to the requirement for no increase of the 1% AEP (100 year) 6-hour event volume.

The site runoff will be restricted in all events up to and including the 1 in 100-year event plus climate change and as such meets with the criteria.

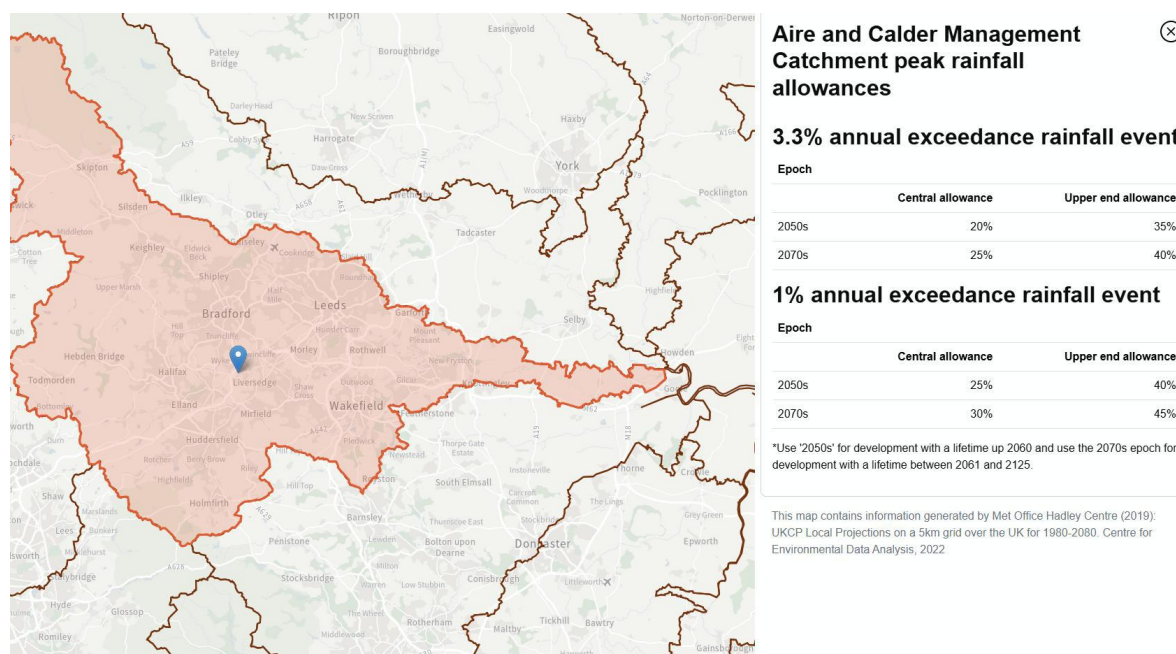


5.3 Climate Change Allowance

For the proposed drainage design an allowance for climate change must be applied to the 1 in 100-year storm event.

Up to date climate change allowance can be found on the Environment Agencies web site for the development catchment which is the Aire and Calder Management Catchment.

An extract from the EA climate change allowance data map for the proposed development site is shown below.



The mapping gives a range of uplift percentages for development base on the design life.

EA guidance states that both the central and upper allowances should be considered as part of the drainage design.

For design purposes the proposed climate change uplift to be applied for this development is 45%.

5.4 Surface Water Attenuation

Due to the restricted discharge on plot surface water attenuation will be required.

Based on the agreed discharge rate, proposed impermeable areas and allowance for climate change the following attenuation volumes have been calculated using Info Drainage design software.



The Design Parameters used for the attenuation estimate for the proposed development are:

- Rainfall FEH 2022.
- Proposed Impermeable area = 2.13ha.
- Pipe capacity discharge rate = 10.65 l/s based on a 1.000m design head and minimum orifice of 75mm.
- Uplift for climate change 45%.

The proposed surface water attenuation calculations are located in Appendix F.

The following surface water attenuation volumes have been calculated and are summarised below:

1:2 Year Return Period = circa 651.00m³.

1:30 Year Return Period = circa 1331.00m³.

1:100 Year Return Period (+45% cc) = circa 2921.00m³.

The proposed on-site drainage system shall be designed in accordance with the relevant requirements of Codes for Adoption, Sewers for Adoption, national non-statutory technical SuDS standards, British Standards and Building Regulations and industry best practice and shall demonstrate that:

- No surcharge of pipes occurs in the 1 in 2-year rainfall event.
- No surface flooding occurs in 1 in 30-year rainfall event.
- No flooding to buildings and adjacent properties occurs in 1 in 100-year rainfall event (including an allowance of for the effects of future climate change), as defined in NPPF Technical Guidance. The climate change allowance shall be 45%.

The drainage system will be a gravity system via pipes and manholes to the attenuation basin and vortex flow controller.

Preliminary surface water attenuation storage will be provided in a detention basin.

Restricted discharge will be achieved via a vortex flow controller limiting flow to the required discharge rate.

The proposed plot drainage is detailed on drawing 5414-JPG-ZZ-ZZ-DR-D-1400 and is located in Appendix G.

5.5 Water Quality and Pollution Control

It is a requirement to ensure that the quality of any receiving water body is not adversely affected by the development.



Both SuDs and proprietary treatment systems can be incorporated into the drainage design to assist with cleaning of the surface water runoff.

Clean roof water drainage will discharge directly into the sealed drainage network (i.e., not via gullies) and will then discharge into the on-site private drainage network. Treatment will be provided in the SuDs features located in the private drainage system.

Runoff from the access road, parking areas and service yards will be routed through appropriately sized oil interceptors and/or SuDs features to provide treatment of the runoff prior to discharge offsite.

The pollution hazard level of surface water runoff from the development is detailed in Chapter 26 of the SuDs Manual.

The proposed development site is classified as low risk according to Table 26.2 of the CIRIA SuDS Manual.

Table 26.3 of the CIRIA SuDS Manual details SuDS mitigation indices for Total Suspended Solids (TSS), metals and hydrocarbons for a range of SuDS devices.

The pollution hazard indices for the development have been compared against the mitigation indices of the proposed SuDS devices. The proposed SuDS mitigation indices calculation can be found in the table below.

The pollution hazard indices for the development have been compared against the mitigation indices of the proposed SuDS devices and are tabulated below.

Pollution Hazard Indices and SuDS mitigation is as follows:

Commercial Yard and Delivery Areas

	TSS	Metals	Hydrocarbons
Hazard Indices Medium	0.70	0.60	0.70
1st Mitigation Basin	0.50	0.50	0.60
2nd Mitigation Petrol Separator (0.50 Index)	0.40	0.30	0.45
Total Mitigation	0.90	0.80	1.00

Building Roofs

	TSS	Metals	Hydrocarbons
Hazard Indices Low	0.30	0.20	0.05
1st Mitigation Basin	0.50	0.50	0.60
Total Mitigation	0.50	0.50	0.60



5.6 Exceedance Event

For storm events above the design event of 1 in 100-year event plus climate change run off will be managed so that it would not affect the proposed building along with any existing buildings and third party property/development.

5.7 Foul Water Drainage

The site has been plateaued and benefits from foul water drainage services within the plot boundary.

Direct connection into the existing stub will be utilised for the developments foul discharge.

Refer to Appendix G for the drainage strategy drawing.

6.0 CONCLUSION

The report has been prepared to assess the drainage impact for the construction of two industrial units at the Former Wastewater Treatment Works, North Bierley, Oakenshaw.

As confirmed by the accompanying Flood Risk Assessment Report approved within the Outline planning consent, the site largely falls within Flood Zone 1 (low flood risk) and is considered to be at an acceptable flood risk from all sources.

The onsite private surface water drainage system will be design and constructed in accordance with Building Regulations, all national and local standards and best practice.

Hierarchy for discharge of surface water has been considered as detailed in building regulations document H3. Consideration should firstly be given to soakaway, infiltration, watercourse, and sewer in that priority order.

The LLFA has confirmed the preferred method of discharge is to watercourse at 5 l/s/ha.

Proposed surface water from the development will be restricted to greenfield run off rates while maintaining a minimum orifice size of 75mm.

Attenuation storage will be provided on site in a detention basin.

Proposed allowance for climate change for this development is 45%.

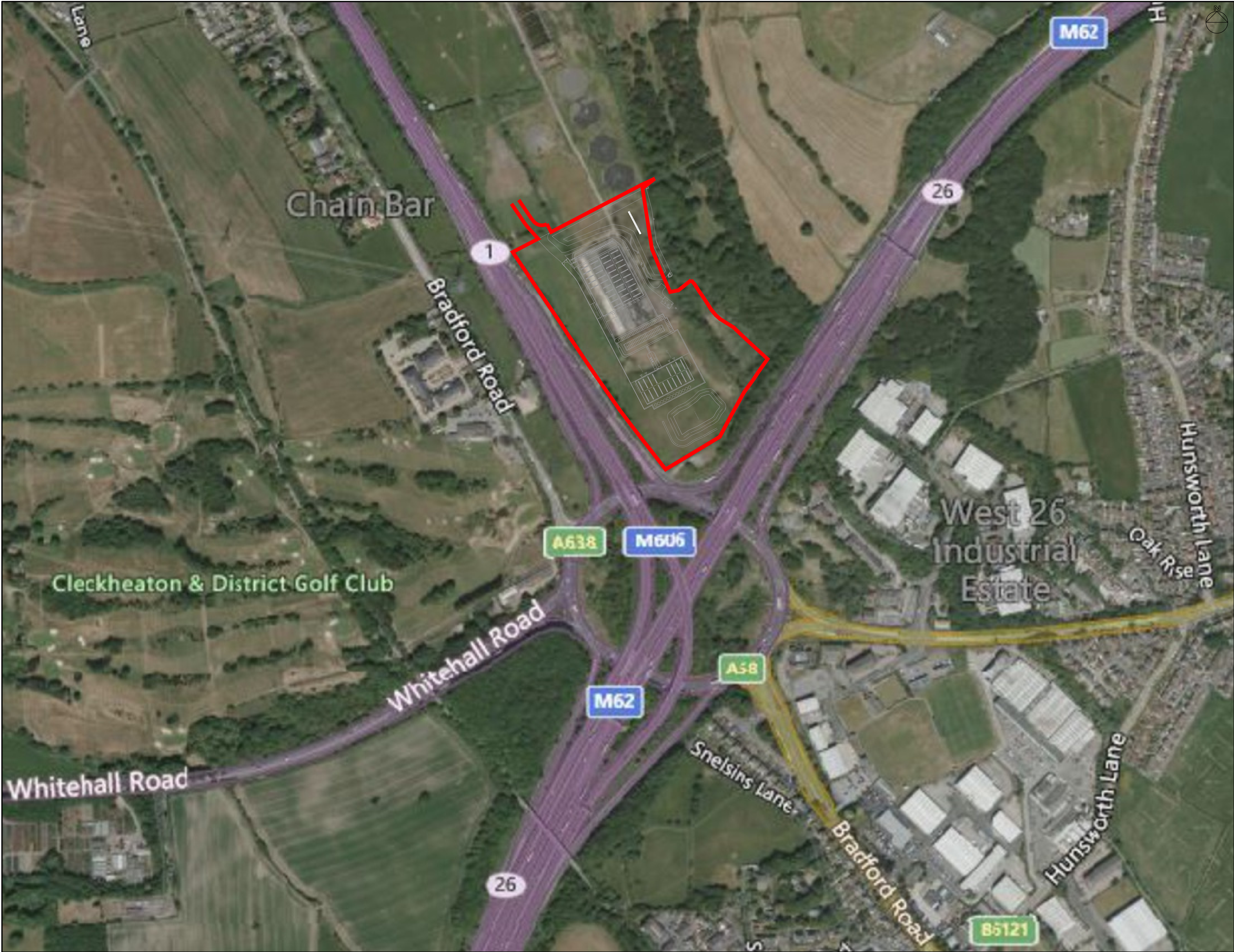
The report provides a robust case for justifying the means of surface water drainage and that the site can be suitably, safely, and sustainably drained.



Overall, this report demonstrates that the proposed surface water drainage system is reasonable and acceptable for the proposed development, and with the implementation of the conditioned flood mitigation measures, the development can be brought into use safely and without impact to 3rd party land.



Appendix A Site Location Plan



SITE LOCATION PLAN
SCALE 1:2500

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DO NOT SCALE (A1)

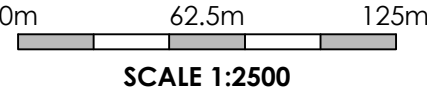
NOTES

GENERAL NOTES

- ALL MATERIALS AND WORKMANSHIP IS TO COMPLY WITH JPG CONSULTANTS STANDARD SPECIFICATION & ALL RELEVANT BRITISH & EUROPEAN STANDARDS.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, M & E CONSULTANTS AND JPG CONSULTANTS DRAWINGS.
- ANY DISCREPANCIES SHOULD BE REPORTED TO THE ENGINEER IMMEDIATELY SO THAT CLARIFICATION CAN BE SOUGHT PRIOR TO COMMENCEMENT OF WORKS.

SITE INFORMATION

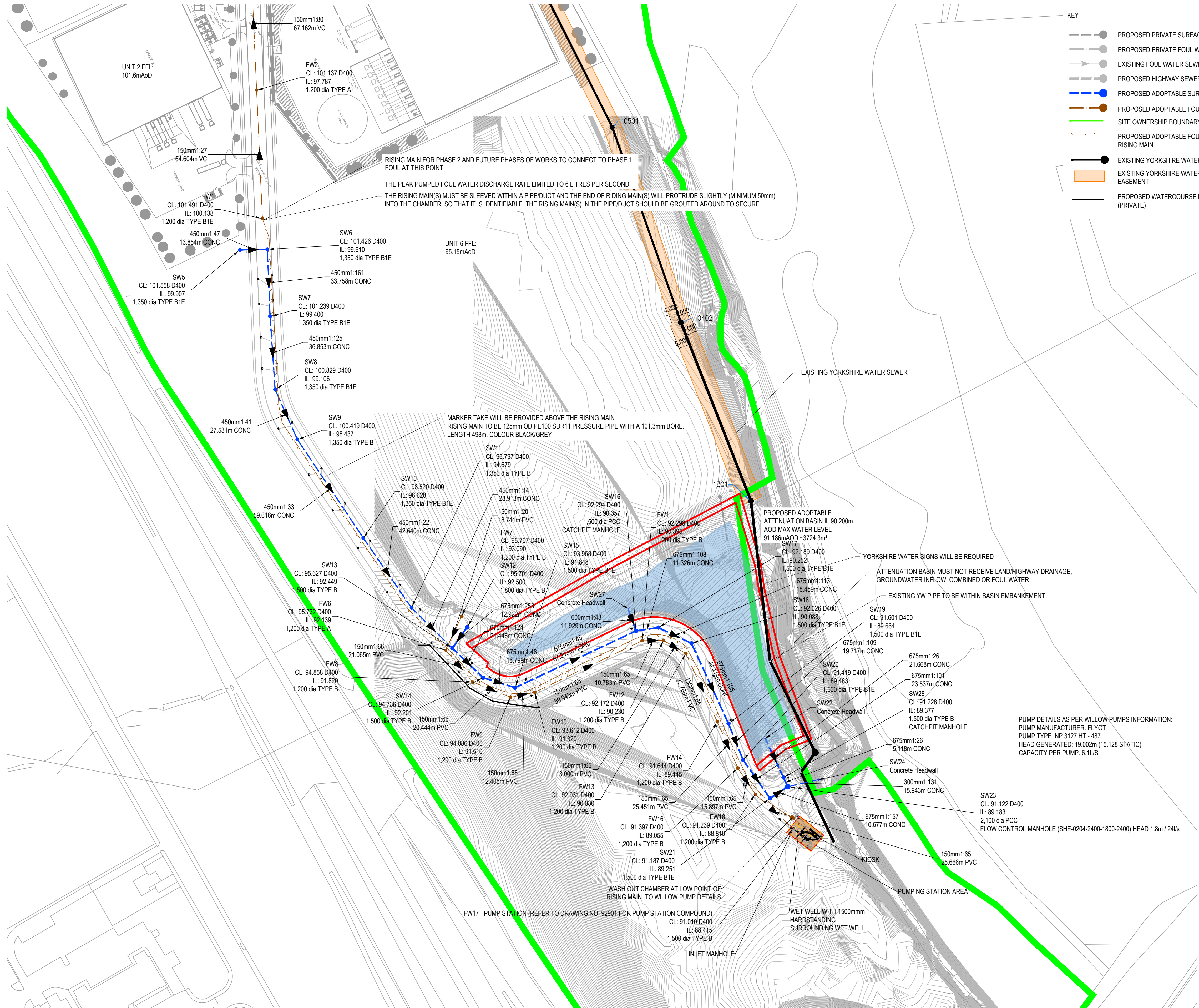
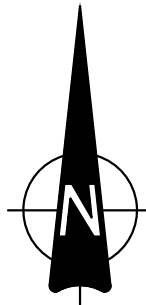
SITE ADDRESS
FORMER WASTEWATER TREATMENT WORKS,
NORTH BIERLEY, OAKENSHAW BD19 4TS
OS CO-ORDINATES - E418114, N427087.



P01	ISSUED FOR INFORMATION.	25/09/26	MKJW	MKJW
REV	DESCRIPTION	DATE	CHK	BY
Project NORTH BIERLEY, WWTW, OAKENSHAW				
Drawing Title SITE LOCATION PLAN				
INFORMATION				
JPG www.jpg.group E admin@jpg.group T +44 (0)113 263 1155				
5414-JPG-ZZ-ZZ-DR-D-1450			S2	P01



Appendix B Existing Private Drainage Layout



- KEY
- PROPOSED PRIVATE SURFACE WATER DRAIN
 - PROPOSED PRIVATE FOUL WATER DRAIN
 - EXISTING FOUL WATER SEWER
 - PROPOSED HIGHWAY SEWER
 - PROPOSED ADOPTABLE SURFACE WATER SEWER
 - PROPOSED ADOPTABLE FOUL WATER SEWER
 - SITE OWNERSHIP BOUNDARY
 - PROPOSED ADOPTABLE FOUL WATER RISING MAIN
 - EXISTING YORKSHIRE WATER SEWER
 - EXISTING YORKSHIRE WATER SEWER EASEMENT
 - PROPOSED WATERCOURSE DIVERSION (PRIVATE)

GENERAL NOTES:

- YORKSHIRE WATER NOTES**
- ALL ADOPTABLE SEWER WORKS AND MATERIAL TO BE IN ACCORDANCE WITH "CODE FOR ADOPTION", THE RELEVANT BRITISH/EUROPEAN AND YORKSHIRE WATERS' STANDARDS/REQUIREMENTS/ADDENDUM TO THE MECHANICAL AND ELECTRICAL SPECIFICATION AND KITEMARKED
 - MANHOLE COVERS SHALL HAVE A CLEAR OPENING OF 600mm AND SHALL BE CLASS D400 TO BS EN 124 WITH 150mm DEEP FRAMES IN HIGHWAYS.
 - FILLED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF YORKSHIRE WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT.
 - YORKSHIRE WATER IS NOT OBLIGED TO ACCEPT FILTER DRAIN/AND DRAINAGE RUN-OFF INTO THE PUBLIC SEWER NETWORK OR ADOPTABLE DRAINAGE SYSTEM (DIRECTLY OR IN-DIRECTLY). AN ALTERNATIVE METHOD OF DISPOSAL OF THE LAND DRAINAGE RUN-OFF WILL THEREFORE BE REQUIRED AND YOU WILL HAVE TO LIAISE WITH THE LOCAL AUTHORITY LAND DRAINAGE SECTION WITH REGARDS TO THE DISPOSAL OF FILTER DRAIN/AND DRAIN RUN-OFF.
 - COVER SLABS MUST CARRY THE BSI KITEMARK OR WILL BE REJECTED BY YORKSHIRE WATER INSPECTOR. WHERE THE CLEAR OPENING OF THE KITEMARKED PRODUCT IS DIFFERENT TO THAT OF THE COVER AND FRAME, A LOAD BEARING SLAB SHOULD BE FITTED ABOVE THE COVER SLAB TO BRING THE SIZE DOWN TO 600x600mm, FOR THE YORKSHIRE WATER SPECIFIED COVER SIZE. PLEASE REFER TO CONCRETE PIPE SYSTEMS ASSOCIATION (CPSA), 'TECHNICAL BULLETIN' ISSUED AUTUMN 2004 FOR KITEMARKED COVER SLAB OPENING SIZES.
 - SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVING THAT SUCH PRECAUTIONS ARE NOT NECESSARY.
 - THE ADOPTABLE SEWERS SHOULD BE A MINIMUM OF 1m AND MANHOLES 0.5m FROM KERB FACES AND SERVICE MARGINS.
 - SEWERS MUST HAVE 5 METRES CLEARANCE FROM TREES AND HEDGES (PLEASE ALSO REFER TO FIGURE 2.3 ON PAGE 33 IN "SEWERS FOR ADOPTION" 6TH EDITION FOR RESTRICTIONS ON TREE PLANTING ADJACENT TO SEWERS)
 - SEWERS TO BE LAID IN CLASS "S" BEDDING (150mm GRANULAR BED AND SURROUND), WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN 1.2m IN HIGHWAYS AND VERGES (OR LESS THAN 900mm IN NON-VEHICULAR ACCESS AREAS) THEN A CONCRETE SLAB SHOULD BE PROVIDED ABOVE GRANULAR BED AND SURROUND.
 - BEDDING AND BACKFILL TO CONFORM TO THE REQUIREMENT OF THE WATER INDUSTRY SPECIFICATION 4-08-02 (TABLE A2)
 - THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.
 - YORKSHIRE WATER POLICY IS NOT TO ACCEPT TYPE "C" BRICK MANHOLES AND 1050mm DIA MANHOLE RINGS. INSTEAD IT IS PREFERRED THAT YOU USE A TYPE "B" MANHOLE WITH 1200mm DIA OR 1500mm DIA RINGS, WITH OPENING SITED OVER THE CHANNEL WHERE DEPTH OF COVER TO PIPE SOFFIT IS 1 - 1.5m.
 - SEWERS MUST HAVE 5 METRES CLEARANCE FROM TREES AND HEDGES OR WIDTH OF CANOPY A MATURE HEIGHT
 - THERE SHOULD BE ENOUGH CLEARANCE TO ACCOMMODATE THE BEDDING FOR BOTH PIPE, APPROX 300mm; IF CROSSOVER IS NEAR THE ROCKER THEN THE CLEARANCE MAY BE INCREASED.
 - ADOPTABLE PLASTIC SEWER PIPES TO BE BSI KITEMARKED (CERTIFIED TO WIS 4-35-01 AND BS EN 13476). ADOPTABLE PLASTIC SEWER PIPES TO BE LAID IN MAXIMUM 3 METRE LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER LENGTHS. PLASTIC CHANNEL SECTIONS IN MANHOLES ARE NOT ACCEPTABLE AND YORKSHIRE WATER WOULD PREFER CLAYWARE CHANNEL IN MANHOLES. WE HAVE FOUND THAT PLASTIC CHANNELS ARE DIFFICULT TO SET IN CONCRETE BECAUSE THEY FLOAT AND A SATISFACTORY FINISH CANNOT BE OBTAINED ON THE BENCHING.
 - THE MINIMUM CRUSHING STRENGTH FOR CLAY PIPES SHOULD BE AS FOLLOWS: 100mm DIA 40kN/m, 150mm DIA 40kN/m, 225mm DIA 45 kN/m AND 300mm DIA 72kN/m. THE MINIMUM CRUSHING STRENGTH FOR CONCRETE PIPES SHOULD BE - (CLASS 120 TO EN 1916/BS5911-1 2002). PLASTIC PIPES SHOULD CONFORM TO WIS 4-35-01 AND BS EN13476.
 - WHERE A B125 COVER AND FRAME HAS BEEN APPROVED, THIS MUST NOT BE COATED IN PLASTIC AND MUST HAVE LIFTING EYES SUITABLY SIZED TO ACCOMMODATE STANDARD LIFTING KEYS. SCREW DOWN COVERS ARE NOT ACCEPTABLE.

P05	REVISED TO AMENDED PUMP STATION POSITION	25/04/22	EF	ACS
P04	REVISED TO YW COMMENTS	14/03/22	EF	ACS
P03	REVISED TO SUIT YW COMMENTS	26/01/22	EF	ACS
P02	REVISED TO SUIT HIGHWAYS UPDATES	23/10/21	OT	OT
P01	FIRST ISSUE	13/03/21	OT	NT
Rev:	Description:	Date:	By:	Chkd:

Curtins

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leeds@curtins.com
www.curtins.com

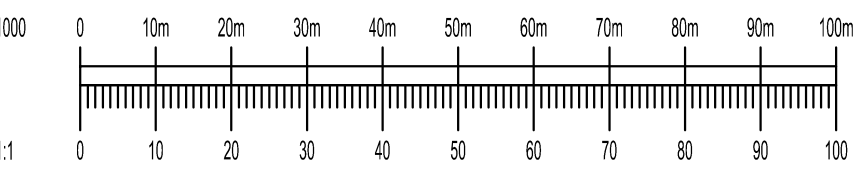
Civils & Structures • Transport Planning • Environmental • Infrastructure • Geotechnical • Conservation & Heritage • Principal Designer
Birmingham • Bristol • Cambridge • Cardiff • Douglas • Dublin • Edinburgh • Glasgow • Kenton • Leeds • Liverpool • London • Manchester • Nottingham

Status: **SUITABLE FOR INFORMATION** **S2**

Project: **INTERCHANGE 26**

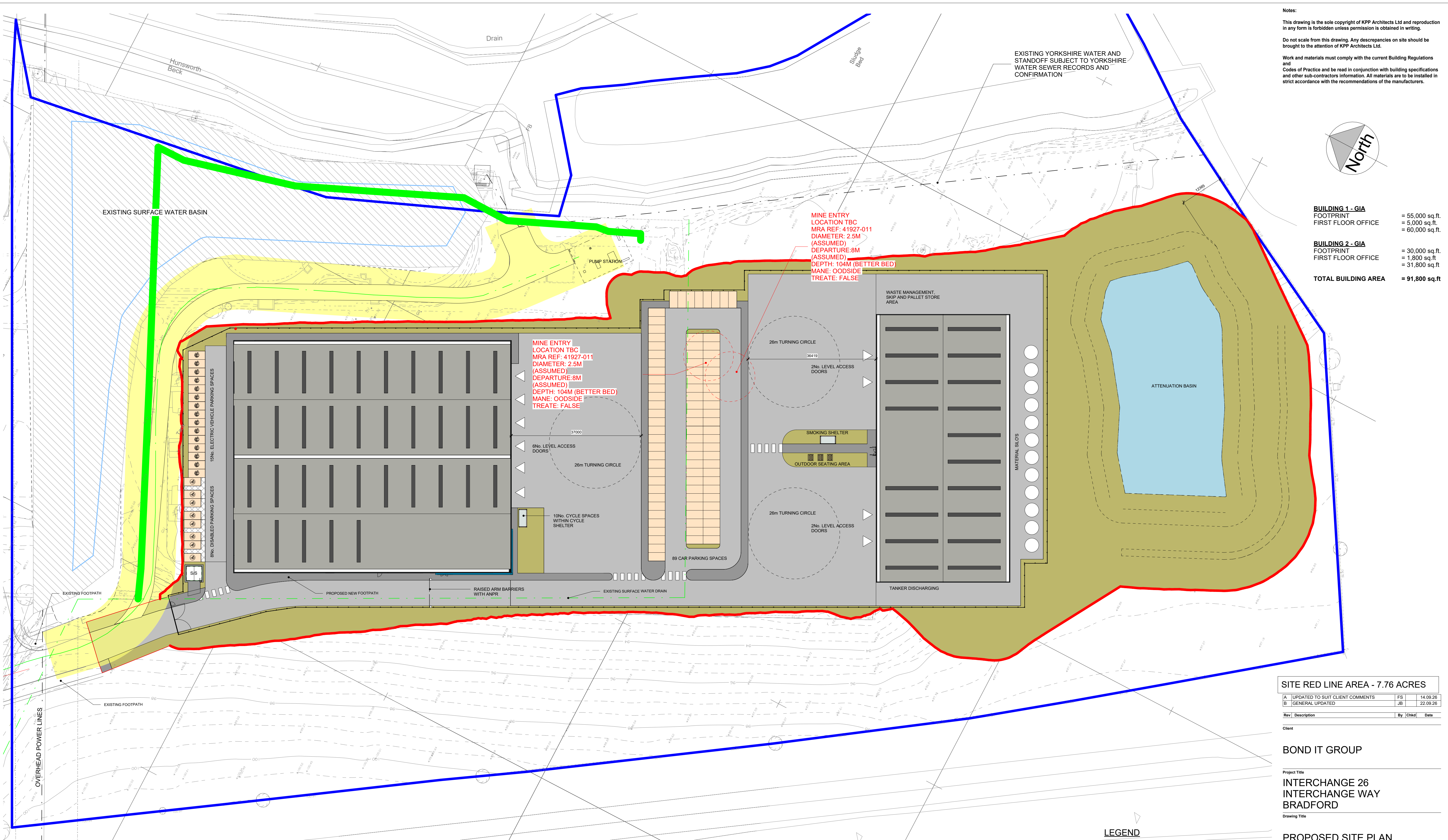
Orig Title: **S104 DRAINAGE LAYOUT SOUTH**

Size:	Date:	Drawn By:	Designed By:	Checked By:
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Scale:	1:1000			
Project No:	Originator:	Volume:	Level:	Type:
065646	CUR	00	ZZ	DR
C	C			
92502				
P05				





Appendix C Site Layout

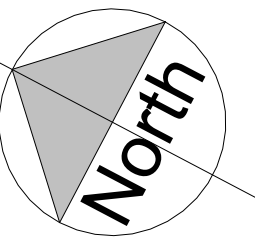


Notes:

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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.



BUILDING 1 - GIA		
FOOTPRINT	= 55,000 sq.ft.	
FIRST FLOOR OFFICE	= 5,000 sq.ft.	
	= 60,000 sq.ft.	
BUILDING 2 - GIA		
FOOTPRINT	= 30,000 sq.ft.	
FIRST FLOOR OFFICE	= 1,800 sq.ft.	
	= 31,800 sq.ft.	
TOTAL BUILDING AREA	= 91,800 sq.ft	

MINE ENTRY
LOCATION TBC
MRA REF: 41927-011
DIAMETER: 2.5M
(ASSUMED)
DEPARTURE: 8M
(ASSUMED)
DEPTH: 104M (BETTER BED)
MANE: OODSIDE
TREATE: FALSE

MINE ENTRY
LOCATION TBC
MRA REF: 41927-011
DIAMETER: 2.5M
(ASSUMED)
DEPARTURE: 8M
(ASSUMED)
DEPTH: 104M (BETTER BED)
MANE: OODSIDE
TREATE: FALSE

LEGEND

	EXISTING UNDERGROUND CABLES
	EXISTING DRAIN
	OVERHEAD CABLES
	EASEMENT ZONE FOR PUMP STATION
	YORKSHIRE WATER STANDOFF



SITE RED LINE AREA - 7.76 ACRES

A	UPDATED TO SUIT CLIENT COMMENTS	FS	14.09.26
B	GENERAL UPDATED	JB	22.09.26

Rev	Description	By	Chkd	Date

Client

BOND IT GROUP

Project Title
**INTERCHANGE 26
INTERCHANGE WAY
BRADFORD**

Drawing Title

PROPOSED SITE PLAN

Lodge House
12 Town Street
Horsforth, Leeds LS18 4RJ

T : +44 (0) 113 2390460
E : architects@kpp-leeds.co.uk
W : www.kpp-leeds.co.uk

Scale	Size	Date	Drawn	Checked
As indicated	A1	JULY'26	JM	.

Status
PLANNING

KPP Job No. 2499	Revision B
----------------------------	----------------------

Project Originator Level Type Role Class Number
ICB-KPP-ZZ-DR-A-GA- 2002



Appendix D Proposed Levels



Appendix E Proposed Impermeable Area Plan



Appendix F Attenuation Calculations



5 John Charles Way
LEEDS LS12 6QA
Tel: 0113 263 1155

admin@jpg.group
www.jpg.group

Project No 5414

Sheet No 1

Made By MKJW

Date 25/09/26

Project NORTH BIERLEY WWTW, OAKENSHAW

QUICK STORAGE ESTIMATE 1 IN 2
DESIGN PARAMETERS

Quick Storage Estimate

Input

Input Type

User Input

Area (ha)

2.13

Volumetric Runoff Coefficient

1.000

Discharge Rate (L/s)

10.65

Infiltration Rate (m/hr)

0.0

Safety Factor

2.0

Quick

Calculate

Create New

From Library

All

FEH - 1 in 100 + 45% CC

FEH - 1 in 30

FEH - 1 in 2

Method

FEH

Number of Storms

38

Max. Run Time (mins)

20160

Input

Results

2D Graph

OK

Cancel

Help



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Project No 5414

Sheet No 2

Made By MKJW

Date 25/09/26

Project NORTH BIERLEY WWTW, OAKENSHAW

QUICK STORAGE ESTIMATE 1 IN 2
RESULTS

Quick Storage Estimate

Results

Quick Storage Estimate variables require approximate storage of between 378m³ - 651m³.
These values are estimates only and should not be used for final design purposes.

Input

Results

2D Graph

OK

Cancel

Create NewHelp

RESULT = 651m³



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Project No 5414

Sheet No 1

Made By MKJW

Date 25/09/26

Project NORTH BIERLEY WWTW, OAKENSHAW

QUICK STORAGE ESTIMATE 1 IN 30
DESIGN PARAMETERS

Quick Storage Estimate

Input

Input Type

User Input

Area (ha)

2.13

Volumetric Runoff Coefficient

1.000

Discharge Rate (L/s)

10.65

Infiltration Rate (m/hr)

0.0

Safety Factor

2.0

Quick

Calculate

Create New

From Library

All

FEH - 1 in 100 + 45% CC

FEH - 1 in 30

FEH - 1 in 2

Method

FEH

Number of Storms

38

Max. Run Time (mins)

20160

Input

Results

2D Graph

OK

Cancel

Help



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Project No 5414

Sheet No 2

Made By MKJW

Date 25/09/26

Project NORTH BIERLEY WWTW, OAKENSHAW

QUICK STORAGE ESTIMATE 1 IN 30
RESULTS

Quick Storage Estimate

Results

Quick Storage Estimate variables require approximate storage of between 863m³ - 1331m³.
These values are estimates only and should not be used for final design purposes.

Input

Results

2D Graph

OK

Cancel

Create New

Help

RESULT = 1331m³



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Project No 5414

Sheet No 1

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Project NORTH BIERLEY WWTW, OAKENSHAW

QUICK STORAGE ESTIMATE 1 IN 100+45%CC
DESIGN PARAMETERS

Quick Storage Estimate

Input

Input Type

User Input

Area (ha)

2.13

Volumetric Runoff Coefficient

1.000

Discharge Rate (L/s)

10.65

Infiltration Rate (m/hr)

0.0

Safety Factor

2.0

Quick

Calculate

Create New

From Library

All

FEH - 1 in 100 + 45% CC

FEH - 1 in 30

FEH - 1 in 2

Method

FEH

Number of Storms

38

Max. Run Time (mins)

20160

Input

Results

2D Graph

OK

Cancel

Help



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Project No 5414

Sheet No 2

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Project NORTH BIERLEY WWTW, OAKENSHAW

QUICK STORAGE ESTIMATE 1 IN 100+45%CC
RESULTS

Quick Storage Estimate

Results

Quick Storage Estimate variables require approximate storage of between 1992m³ - 2921m³.

These values are estimates only and should not be used for final design purposes.

Input

Results

2D Graph

OK

Cancel

Create New

Help

RESULT = 2921m³



Appendix G Proposed Drainage Layout

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