

Design Note

Project COOP LIVE CANALSIDE
Subject Drainage Statement
Project no 0065744
Date 28 May 2025

Revision	Description	Issued by	Date	Approved (signature)
00	For Information	CR	28.05.2025	AJH
00	For Information	CR	09.07.2025	AJH

1 Purpose

The purpose of this technical note is to explain the drainage proposals for the COOP LIVE CANALSIDE Project (planning application no. 143097/FO/2025).

1.1 Scheme Proposals

The scheme proposals are found in the image below, and consist of a new structure placed above the existing podium hardstanding area. Two-storey building, comprising food, beverage and retail space with associated WC, lighting, and other associated works, including external seating areas, integrated into the existing area of landscaping at Co-op Live.

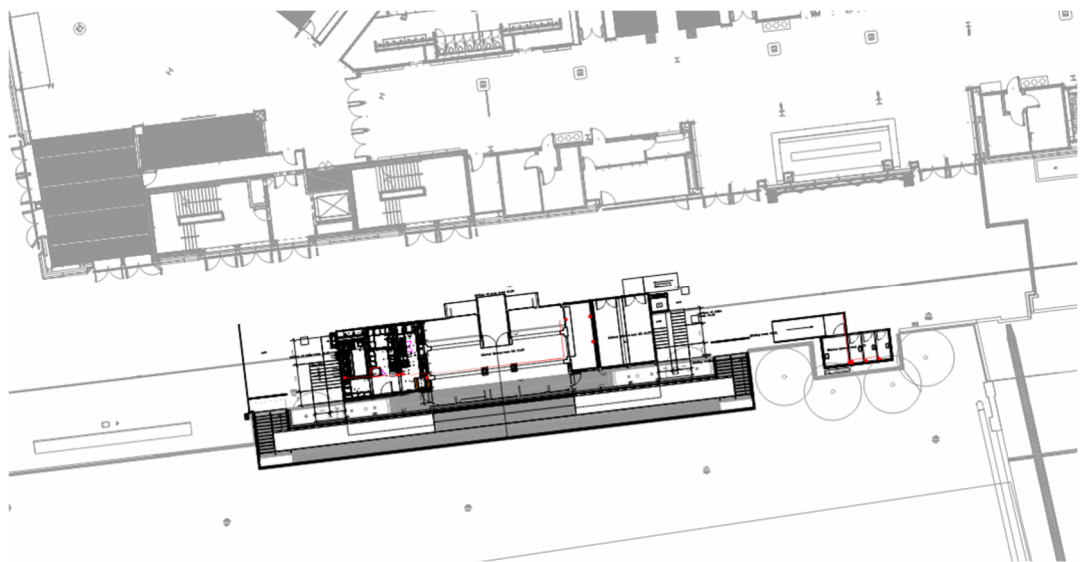


Figure 1—1 Scheme Proposals

2 Surface Water Drainage

2.1 Existing Situation

- The existing finishes, levels and drainage at podium (Level 01) in close vicinity to the new containers are found in the following two images.
- Existing hardstanding is indicated by the light blue hatch.
- The area surrounding the new containers drains to existing channel drains located in the middle of the podium.
- The channel drain outfall to existing above ground drainage in the Co-op Live Arena building.
- The existing Co-op Live Arena above ground drainage connects to a below ground network beneath the Arena building. The below ground network then outfalls to existing private drainage within the Etihad Campus.
- The existing private Etihad Campus drainage outfalls to the River Medlock, see Figure 2—3.
- Discharge from the Coop Live Arena network was agreed during the Arena planning submission as 92.0 l/s. A vortex flow control and attenuation tank is provided to meet the discharge requirement.
- Co-op Live Arena Existing Below Ground Surface Water Drainage Network shown on Figure 2—4.

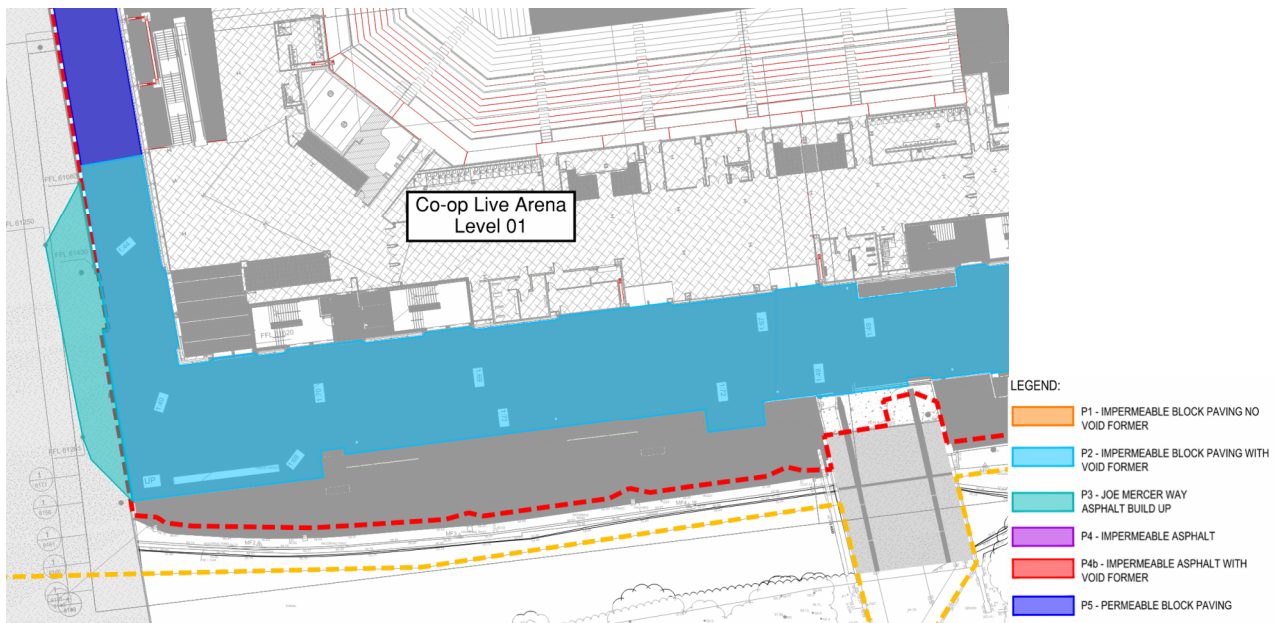


Figure 2—1 Existing Paving

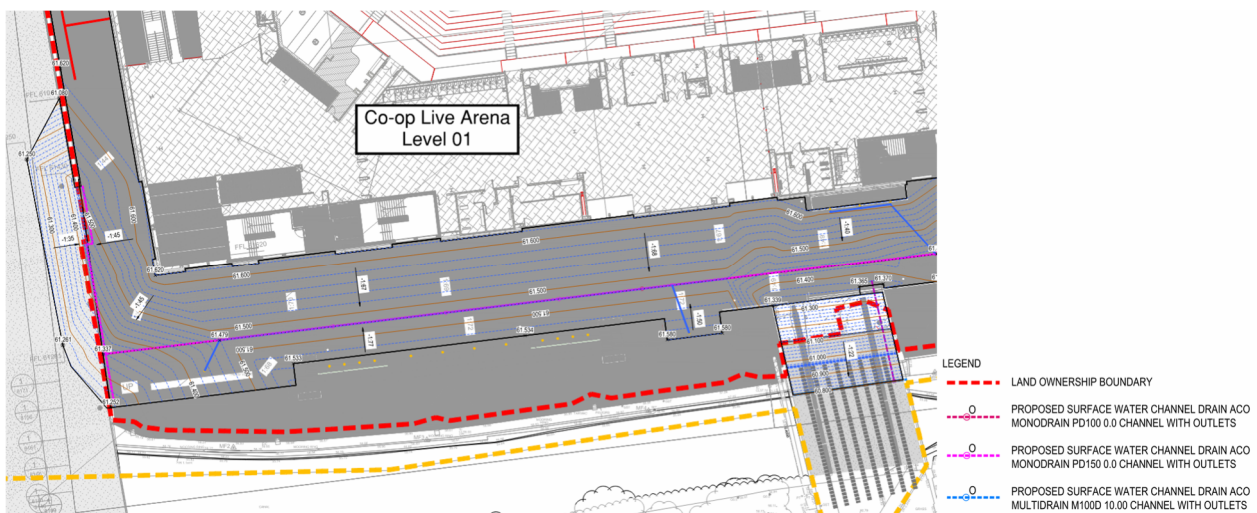


Figure 2—2 Existing Drainage & Levels

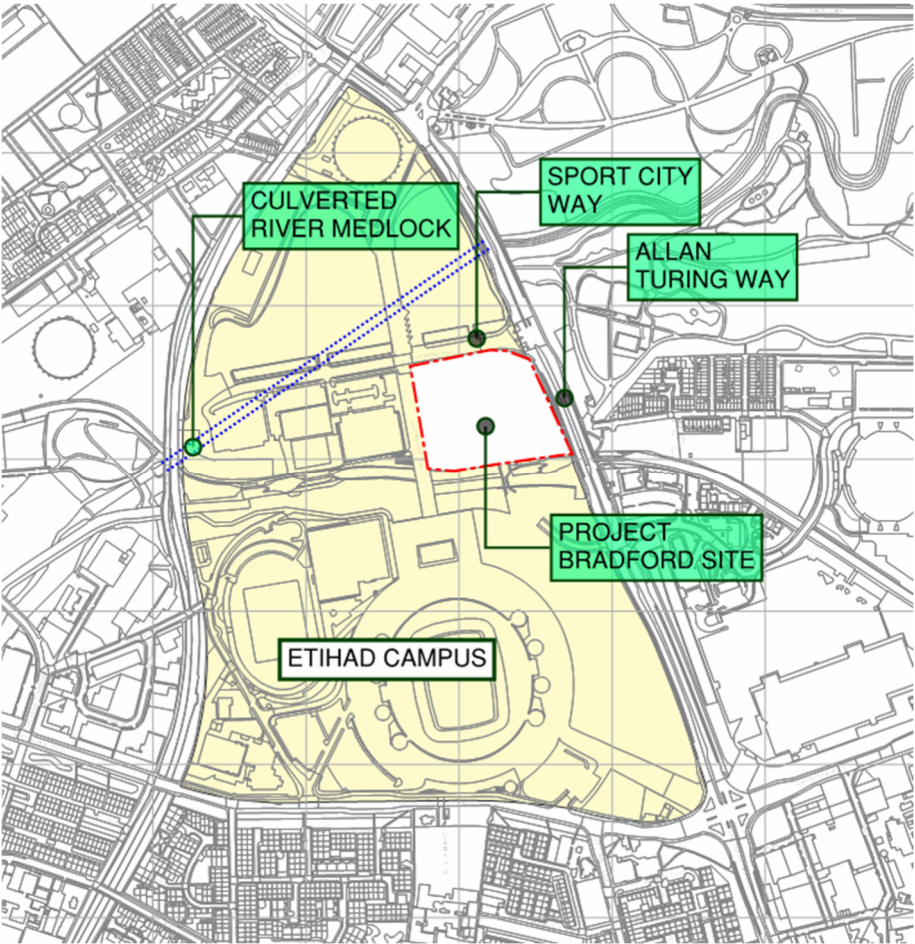


Figure 2—3 Co-op Live in relation to River Medlock

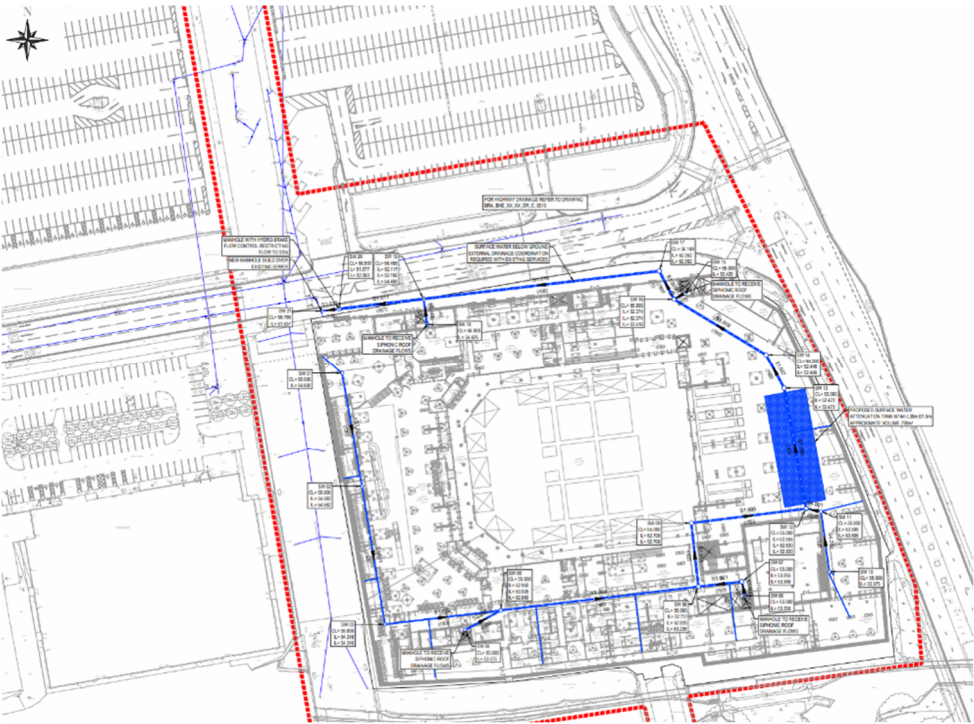


Figure 2—4 Co-op Live Arena Existing Below Ground Surface Water Drainage Network

2.2 Proposed Design

The following summarises the proposed surface water design:

- No change to the overall runoff volumes / rates as new containers will be placed on existing hard landscaping.
- Runoff from containers will be directed to existing outlets used for existing hardstanding to ensure no negative impact to existing downstream drainage.
- Runoff from some container roofs will be collected in rainwater harvesting butts and used for irrigation.
- Runoff from container roofs will generally be collected using roof gutters and connected to the existing podium channel drain outlets. This will convey runoff to the existing Co-op Live surface water system which will attenuation and restrict site discharge to pre-agreed discharge rates.

2.3 Surface Water Hierarchy of Discharge

The following summarises the consideration given to the drainage hierarchy of discharge.

Option 1 – Store Water for Reuse

Rainwater harvesting has been considered and rainwater butts are proposed for planting irrigation.

Option 2 – Infiltration

The new containers are situation above an existing structure, therefore infiltration is not possible. There is no nearby area of significant soft landscape which could be used for infiltration.

Option 3 – Discharge to Watercourse

The proposed strategy connects to existing private drains which ultimately connects to the River Medlock.

Option 4 – Discharge to Surface Water Sewer

See option 3 above.

Option 5 – Discharge to Combined Sewer

See option 3 above.

2.4 Discharge Rate Restriction

As stated above, the discharge rates from the Co-op Live Arena site were agreed with the LLFA during Planning Submission No. 126431/FO/2020. Discharge was agreed as 92l/s. The proposed Canalside project does not increase or decrease impermeable areas, therefore no change will result on the existing Co-op Live Arena network or outgoing discharge rate.

2.5 Proposed Drainage Network

There is no new below ground drainage proposed for the scheme. All new drainage will be above ground and will connect to existing Co-op Live Arena above ground drainage.

2.6 Surface Water Connection Approvals

As stated above, the discharge rates from the Co-op Live Arena site were agreed with the LLFA during Planning Submission No. 126431/FO/2020. Discharge was agreed as 92l/s. As the site connect to existing private drainage no specific connection approvals is required.

3





Figure 3—3 Existing below ground foul water drainage

3.2 Proposed Design

Foul water disposal for the proposed toilet block and other sanitary appliances will be disposed as follows:

- Connect to existing private above / below ground foul drainage within Co-op Live building. Falls and coordination with existing services will be carried out during detailed design.
- Existing private Co-op Live drainage connects to UU sewers to the north of the Arena building.
- Flows from the project are expected to be four toilets (with associated WHB) and floor gullies in kitchen spaces.

3.3 Proposed Drainage Network

There is no new below ground drainage proposed for the scheme. All new drainage will be above ground and will connect to existing Co-op Live Arena above ground drainage. The proposed above ground design is appended to this report.

3.4 Foul Water Connection Approvals

Attached to this report is correspondence from the Co-op Live Arena project to confirm foul connections with UU. No new connections are proposed for this scheme. The Canalside project will connect to existing Co-op Live private drainage.

4 Drainage Maintenance

As stated above the new drainage components will be limited to above ground pipework and rainwater butts for harvesting water.

Maintenance will consist of periodic (circa 6 monthly) inspection and flushing as needed.

All drainage will remain private and be maintained by OVG / COOP Live Arena.

Nick Hall

From: Wastewater Developer Services <WastewaterDeveloperServices@uuplc.co.uk>
Sent: 07 November 2019 17:16
To: Nick Hall
Cc: Edwards, Stuart; O'Brien, Neil; Wastewater Developer Services
Subject: PDE 4200028804 Project Bradford, Sportcity Way, Manchester, M11 3U
Attachments: RE: Etihad Campus - general predevelopment enquiry - 4200028724

**** External Email ****

Good afternoon,

We have carried out an assessment of your application which is based on the information provided. This pre-development advice will be valid for 12 months.

Foul

The foul water flows emanating from this site will be allowed to drain freely in to the nearest available public foul/combined sewerage system located within a public highway. Our preference would be to discharge into the 375mm diameter public combined sewer located within Sport City Way to the northeast of the proposed development.

Surface Water

Surface water from the site is proposed to drain into a private drainage network which ultimately discharges into the River Medlock. As a result, United Utilities cannot comment further but suggest that you discuss the matter with the relevant risk management authority.

Existing Sewers Crossing the Site

There are public sewers crossing the site of which, we will require unrestricted access to the sewer for maintenance purposes, we would ask that you maintain a minimum clearance of (6m refer to table 2.1 SFA) which is measured 3m from the centre line of the pipe unless there happens to be a formal easement agreement in place, in which case the specified detail would apply, assuming that they will remain in situ. However, it is understood that you are considering abandonment of the on-site sewers. If this is the case we suggest that you submit a sewer closure application along with all supporting information as outlined within the guidance document available on our website via the following link:

<https://www.unitedutilities.com/builders-developers/wastewater/sewer-closures/>

The information provided should determine that there are no live flows within the length of sewers which are being proposed to be abandoned or upstream of this location, as identified on the attachment my colleagues has recently provided to you. As discussed on our telephone conversation, as a minimum we request the plan which allows us to cross reference the CCTV drainage survey provided.

It may be possible to divert the flows upstream into a different network which could be assessed as part of a diversion application.

Should abandonment of the on-site public sewer not be possible, United Utilities would encourage the investigation of potential diversion of these sewers as we would not accept building over at this time due to the potential post development access restrictions resulting from the site. We understand you may have evidence of a build over agreement which we did not have on record, if you are able to provide this, we will take it under consideration.

Please refer to the link below to obtain full details of the processes involved with sewer diversions.

<https://www.unitedutilities.com/builders-developers/wastewater-services-and-connections/sewer-diversions/>

Connection Application

Although we may discuss and agree discharge points & rates in principle, please be aware that you will have to apply for a formal sewer connection. This is so that we can assess the method of construction, Health & Safety requirements and to ultimately inspect the connection when it is made. Details of the application process and the form itself can be obtained from our website by following the link below:

<https://www.unitedutilities.com/builders-developers/wastewater-services-and-connections/sewer-connections/>

Sewer Adoption Agreement

You may wish to offer the proposed new sewers for adoption. United Utilities assess adoption application based on Sewers adoption 6th Edition and for any pumping stations our company addenda document. Please refer to link below to obtain further guidance and application pack:

<https://www.unitedutilities.com/builders-developers/wastewater-services-and-connections/sewer-adoptions/>

Please be aware that on site drainage must be designed in accordance with Building Regulations, National Planning Policy, and local flood authority guidelines, we would recommend that you speak and make suitable agreements with the relevant statutory bodies.

Please note, if you intend to put forward your wastewater assets for adoption by United Utilities, the proposed detail design will be subject to a technical appraisal by an Adoption Engineer as we need to be sure that the proposals meets the requirements of Sewers for adoption and United Utilities Asset Standards. The proposed design should give consideration to long term operability and give United Utilities a cost effective proposal for the life of the assets. Therefore, further to this enquiry should you wish to progress a Section 104 agreement, we strongly recommend that no construction commences until the detailed drainage design, submitted as part of the Section 104 agreement, has been assessed and accepted in writing by United Utilities. Any works carried out prior to the technical assessment being approved is done entirely at the developers own risk and could be subject to change.

If I can be of any further assistance please don't hesitate to contact us further.

Kind regards,

Robert Brenton
Developer Engineer
Developer Services and Planning
Network Delivery
United Utilities

T: 01925 537400
[unitedutilities.com](https://www.unitedutilities.com)

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From: Nick Hall [<mailto:Nick.Hall@BuroHappold.com>]

Sent: 22 October 2019 21:14

To: Edwards, Stuart ; Wastewater Developer Services

Cc: Ross Cuming ; Richard.hattan ; Ben Luffman ; Andrew Pottinger ; 042841 Project Bradford

Subject: Etihad Campus - general predevelopment enquiry

Dear Stuart

Many thanks for making time to meet us last week to discuss the Bradford site at the Etihad Campus. I have attached a set of meeting minutes, I'd be grateful if you could let me know if there are any errors or omissions.

As promised, the report attachment to this email presents the information we have obtained about the site to date and presents the current proposals relating to existing foul water sewers and the disposal of foul water from the proposed new development. There is a mark-up summarising the sewer survey info obtained to date contained in Appendix F at the very end of the report.

I have also attached a pre-development enquiry form, completed as far as is possible at this stage.

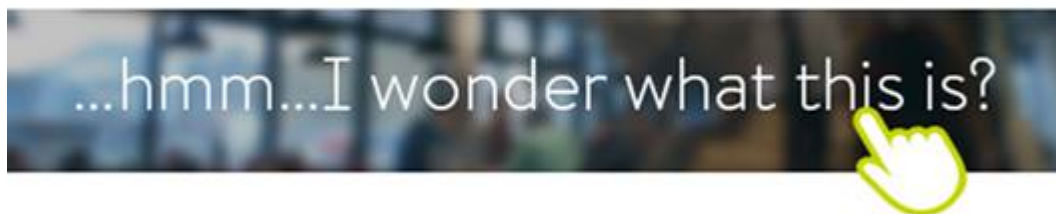
Surface water from the site is to discharge into the culverted River Medlock within the campus boundary, via an existing private campus SW drainage system. I have therefore not presented SW proposals within this email.

I have also not discussed potable water supply within this email. This is being by a different consultant within the design team so we shall progress this element separately.

Please don't hesitate to call should you have any queries or require any further information from us.

Kind regards,

Nick Hall BEng (Hons) CEng MICE
Associate
BuroHappold Engineering | Infrastructure
T: +44 (0)1225 320600
M: +44 (0)7734 776275
www.burohappold.com | [@burohappold](https://twitter.com/burohappold)



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Nick Hall

From: z.todorovic@manchester.gov.uk on behalf of floodriskmanagement@manchester.gov.uk
Sent: 22 October 2019 13:46
To: Siddhesh Raute
Cc: 042841 Project Bradford; floodriskmanagement@manchester.gov.uk; Nick Hall; Rodoula Gregoriou
Subject: RE: Project Bradford: LLFA consultation
Attachments: NTH 185 420 A.pdf

**** External Email ****

Siddhesh

Thank you for the email.

We have noted that you mentioned that the site is currently draining by positive drainage into the v-ditch and into the highway drain. The assessment of the existing flows should not be based on the rational method as they are suggesting unrealistic high flows that are drained through the existing drainage system. Instead, the existing flows need to be estimated based on the capacity of the existing drainage system to convey peak flows based on the diameter of the outfall pipe into the ditch. These much smaller flows are in line with reported regular ponding on site after each rainfall event which indicate that a lot of runoff does not drain straight into the drainage system.

With regards to the next steps, we have already sent you the guidance for developing the design and we trust that it provide sufficient guidance. We would recommend that you send us the fully developed proposal for review and comments and not send developed proposal in steps.

Kind regards

Flood Risk Management
Highways Service, Growth and Neighbourhoods Directorate
Manchester City Council
Tel: 0161 219 6295
Email: floodriskmanagement@manchester.gov.uk
Web: <http://www.manchester.gov.uk/>

POSTAL ADDRESS: Manchester City Council, Public Realm, The Neighbourhood Service, PO Box 532, Town Hall, Manchester M60 2LA

From: Siddhesh Raute <Siddhesh.Raute@BuroHappold.com>
To: "floodriskmanagement@manchester.gov.uk" <floodriskmanagement@manchester.gov.uk>,
Cc: 042841 Project Bradford <042841ProjectBradford@BuroHappold.com>, Nick Hall <Nick.Hall@BuroHappold.com>, Rodoula Gregoriou <Rodoula.Gregoriou@BuroHappold.com>
Date: 09/10/2019 22:29
Subject: RE: Project Bradford: LLFA consultation

Dear Zorica

Many thanks for your email. Having reviewed the document attached within your email, I have outlined our design philosophy for managing surface water runoff from the site and we welcome your comments.

Existing site:

The existing site is brownfield with historic site uses comprising a gas works, hosting sporting events for the Commonwealth Games in 2002 and currently being used as a car park for events hosted within the Etihad Campus. Historic reports detailing the soil characteristics of the site indicate a mixture of demolition rubble, ash, colliery spoil, refuse and reworked natural material. Ongoing site investigations are confirming these observations and are revealing contaminated ground conditions at the site. The existing site covers an area of approximately 2ha.

Existing Drainage:

The existing site is currently drained positively to its northern boundary. Drawing NTH/185/420 received from our client (and attached here) illustrates that existing drainage is conveyed to a V-ditch along the northern perimeter from where its discharged to the highway drainage network. The highway network subsequently drains to the culverted River Medlock north of the site via a hydrocarbon interceptor.

The drainage strategy drawing identifies a 75% run-off rate for surface water and we believe that the lime stabilised material that sits close to surface could be the key reason for impermeable conditions resulting in this assumption. Regular ponding has been reported on site after rainfall events.

Proposed Strategy:

The proposed building footprint occupies approx. 90% of the site area, with external landscaped and hardscaped spaces making up the remaining 10%. In order to improve the quality and quantity of surface water runoff, design proposals currently aim to provide permeable paved areas wherever possible. Additionally an active rainwater harvesting system is being investigated to maximise rainwater capture and re-use. The presence of contaminated ground will make using infiltration techniques unsuitable, however, permeable pavements combined with active rainwater harvesting should capture pollutants from the first flush thus helping improve quality of offsite discharge.

Using the Modified Rational Method and assuming 75% impermeability of existing ground, a resultant discharge rate of 508.6l/s is expected from a 1 in 100 year storm event. The design will aim to provide a min. of 50% betterment on this rate of runoff, but we will aim to extend this to 70% betterment assuming this can be successfully achieved within the building constraints. The betterment in rate of runoff will be provided by a below ground attenuation tank comprising cellular units. Whilst the intention will be to minimise excavations in contaminated ground and offsite transfer of such material the design team will endeavour to maximise the storage that can be provided to reduce the offsite discharge rate.

Next Steps:

- Agree with the Manchester City Council proposed surface water drainage strategy
- Develop drainage proposals in further detail to provide attenuation storage volume and final flow rates being adopted.

We look forward to receiving your feedback.

Thanks and kind regards

Siddhesh

Siddhesh Raute IEng MICE

Senior Engineer

BuroHappold Engineering | Cities

T: +44 (0)1225 320600

Please note: My normal working days are Monday to Thursday

From: z.todorovic@manchester.gov.uk <z.todorovic@manchester.gov.uk> **On Behalf Of** floodriskmanagement@manchester.gov.uk

Sent: 17 September 2019 09:07

To: Siddhesh Raute <Siddhesh.Raute@BuroHappold.com>

Cc: 042841 Project Bradford <042841ProjectBradford@BuroHappold.com>; floodriskmanagement@manchester.gov.uk; Nick Hall <Nick.Hall@BuroHappold.com>; Rodoula Gregoriou <Rodoula.Gregoriou@BuroHappold.com>

Subject: RE: Project Bradford: LLFA consultation

**** External Email ****

Hi Siddhesh

Thank you for the email. Attached is our guidance for developers related to SuDS/surface water management.

If you need further clarifications please let us know.

Regards

Zorica Todorovic
Flood Risk Management
Highways Service, Growth and Neighbourhoods Directorate
Manchester City Council
Tel: 0161 219 6295
Email: floodriskmanagement@manchester.gov.uk
Web: <http://www.manchester.gov.uk/>

POSTAL ADDRESS: Manchester City Council, Public Realm, The Neighbourhood Service, PO Box 532, Town Hall, Manchester M60 2LA

Siddhesh Raute < Siddhesh.Raute@BuroHappold.com > 11/09/2019 16:21		
	To	" floodriskmanagement@manchester.gov.uk " < floodriskmanagement@manchester.gov.uk >,
	cc	Nick Hall < Nick.Hall@BuroHappold.com >, 042841 Project Bradford < 042841ProjectBradford@BuroHappold.com >, Rodoula Gregoriou < Rodoula.Gregoriou@BuroHappold.com >
	Subject	RE: Project Bradford: LLFA consultation

Dear Flood Risk Management Team

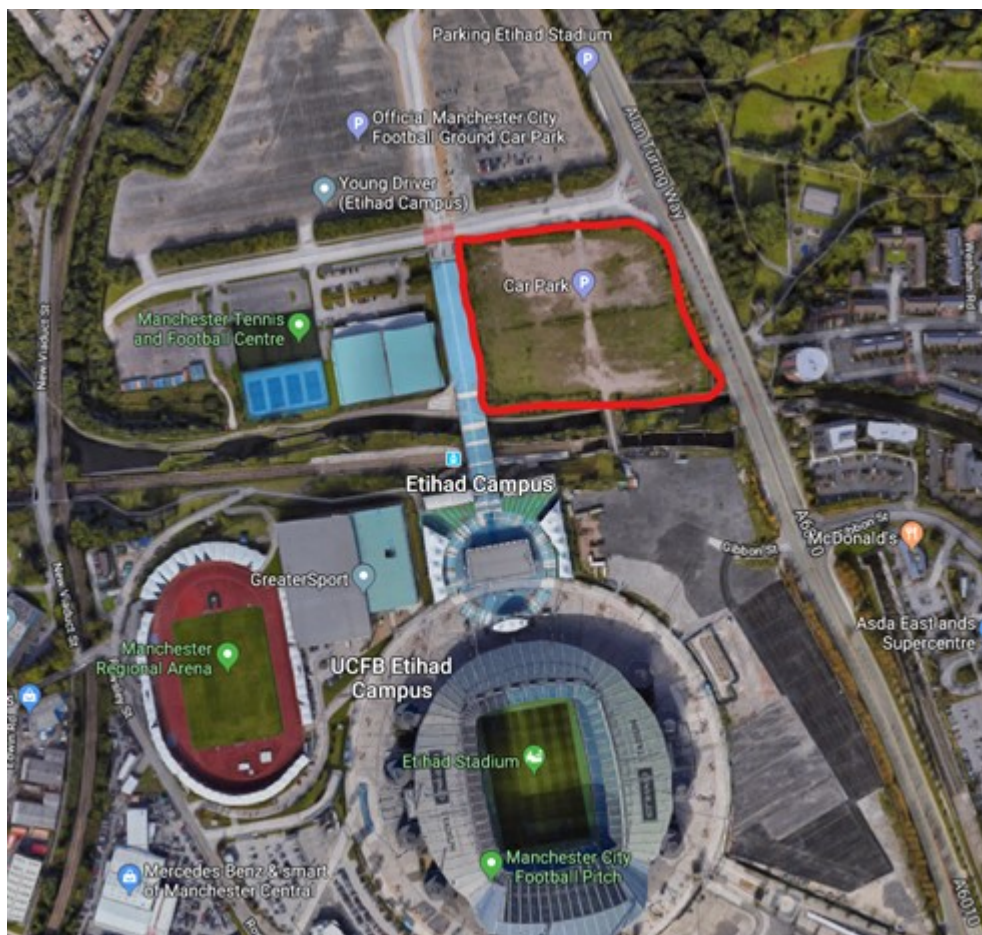
Following on from the email from Muniza Usmani, we are commencing preliminary design for a site in the Etihad Stadium Campus that is adjacent to the Ashton Canal.

The snapshot below shows the site extents in red for the plot marked as 'Car Park'. The site is a brownfield site and drains to the culverted River Medlock.

We want to engage with Manchester City Council (MCC) to understand the principles to adopt in order to develop the surface water management strategy. We would like to understand MCC's requirements related to limiting surface water runoff rates to the River Medlock and any other SuDS requirements that MCC would mandate for developments on brownfield sites.

I look forward to hearing from you.

Kind regards
Siddhesh



Siddhesh Raute IEng MICE
 Senior Engineer
 BuroHappold Engineering | Cities
 T: +44 (0)1225 320600
 Please note: My normal working days are Monday to Thursday

From: Muniza Usmani <m.usmani@manchester.gov.uk>
Sent: 11 September 2019 16:04
To: Siddhesh Raute <Siddhesh.Raute@BuroHappold.com>; floodriskmanagement@manchester.gov.uk
Subject: Re: Project Bradford: LLFA consultation

**** External Email ****

Hi Siddhesh

Please contact the MCC Flood Risk team via floodriskmanagement@manchester.gov.uk to discuss.

Kind regards
Muniza Usmani
 Engineer
 Highways Service, Growth and Neighbourhoods Directorate
 Bridgewater House
 Whitworth Street
 Manchester
 M1 6LT

(PLEASE NOTE: Usual working days are Tuesday, Wednesday and Friday)

Tel 0161 234 1680 / Internal: 801 1680

Email: m.usmani@manchester.gov.uk

Web: <http://www.manchester.gov.uk>

POSTAL ADDRESS: Manchester City Council, PO Box 532, Town Hall, Manchester, M60 2LA

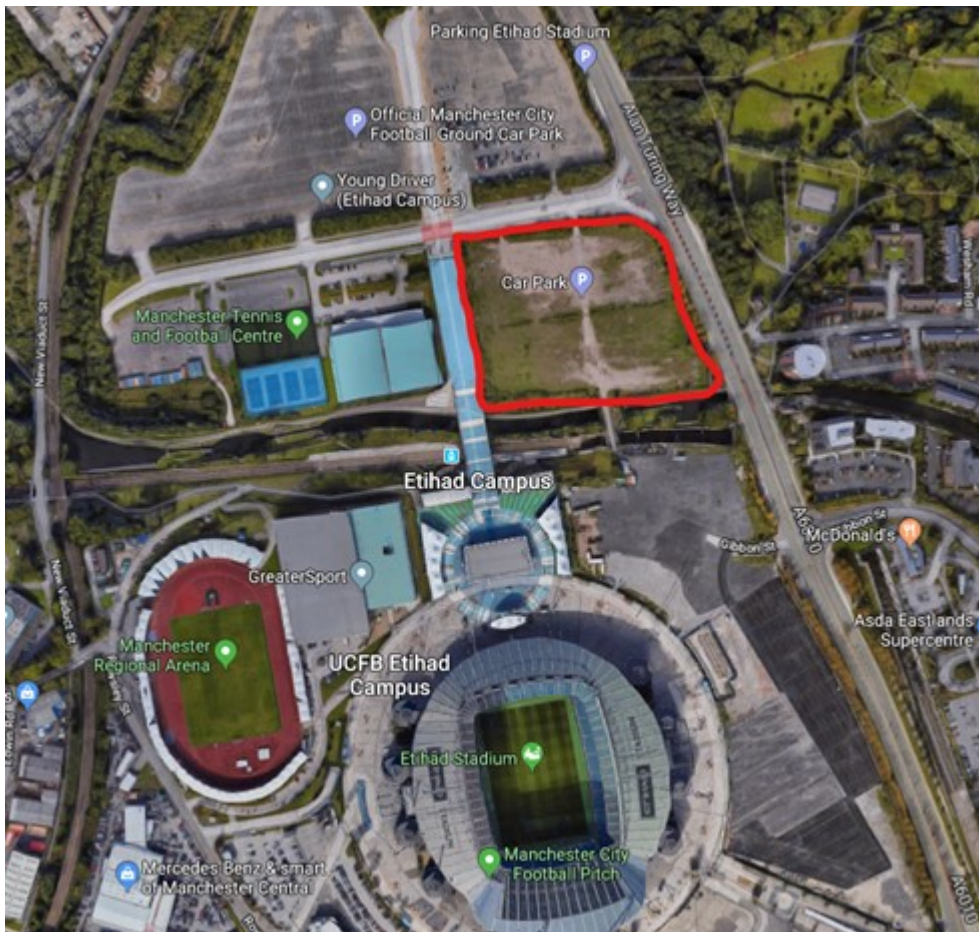
On Wed, 11 Sep 2019 at 15:54, Siddhesh Raute <Siddhesh.Raute@burohappold.com> wrote:

Dear Muniza

I was given your contact details by a colleague of mine who recently corresponded with you on the Mayfield project.

We are commencing preliminary design for a site in the Etihad Stadium Campus that is adjacent to the Ashton Canal. See snapshot below showing site extents in red identified as 'Car Park'. The site is a brownfield site and drains to the culverted River Medlock. We wanted to understand the principles to adopt in order to develop the surface water discharge. It would be useful to determine the flow rates we should be restricting the site for surface water runoff and any other SuDS requirements that MCC would mandate.

Could you please let me know if you are the person to discuss this with or provide details of a colleague with whom I could liaise?



Many thanks and regards
Siddhesh

Siddhesh Raute IEng MICE
Senior Engineer
BuroHappold Engineering | Cities
T: +44 (0)1225 320600

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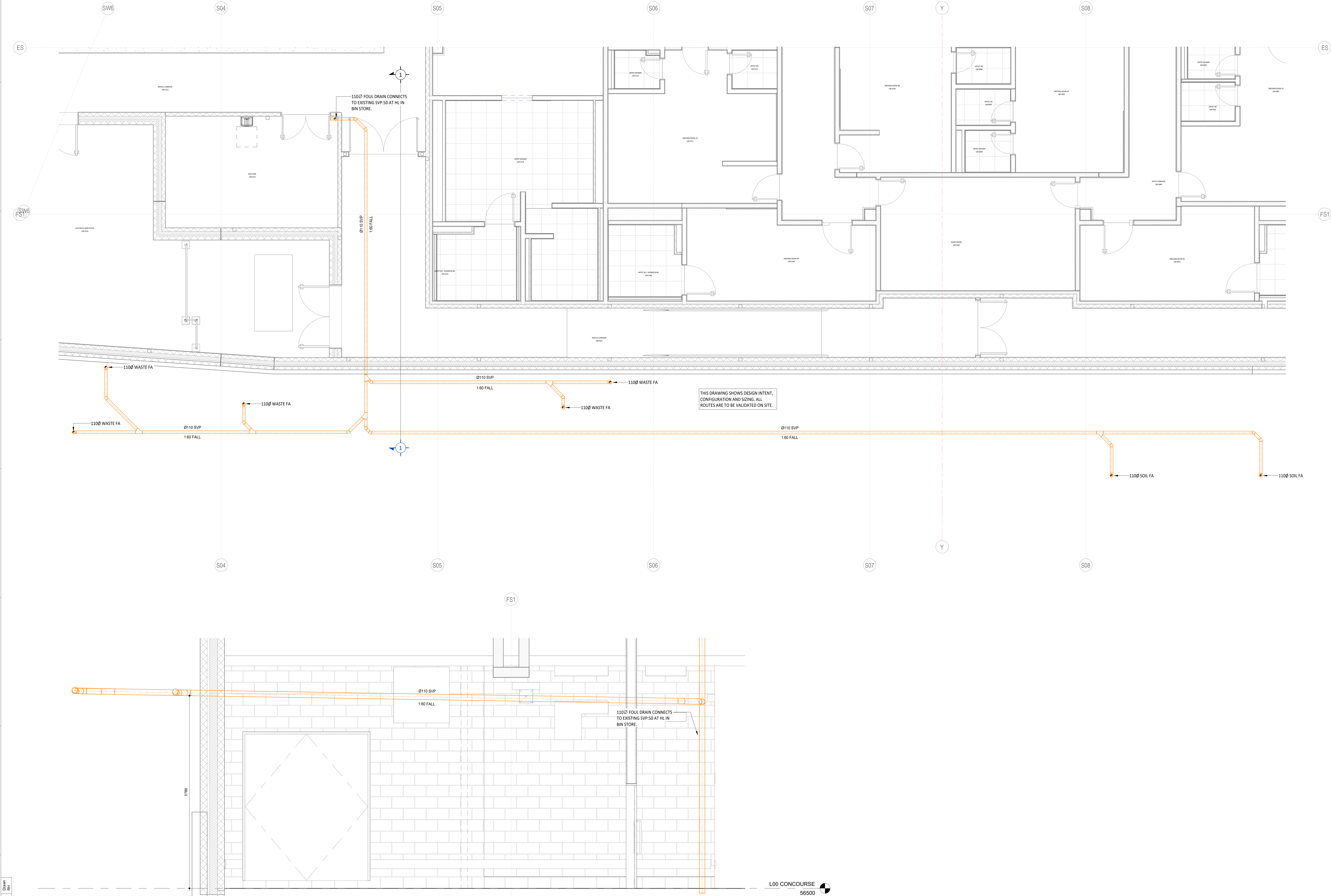
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LINKS

KEYPLAN

NOTES



1 Drainage Section
1 : 25

REV	DATE	DESCRIPTION
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CLIENT
OVG
OAK VIEW GROUP

MEP CONSULTANT
me engineers
ME Engineers Ltd
Oranga Arkwright House, Suite 406 & 407
Parsonage Gardens
Manchester, M3 2LJ
T: +44 (0) 161 667 8041
www.me-engineers.com

PROJECT
COOP LIVE - CANALSIDE

TITLE
CANALSIDE PROPOSED DRAINAGE
REQUIREMENTS LAYOUT

STATUS	S3 - FOR REVIEW & COMMENT	SCALE @ A0
PROJECT NO	20043	1:50
DATE	17/06/2025	
PRINCIPLE	CP	DRAWN
DESIGNER	CP	REV
PROJECT	ORIGIN	BLOCK LEVEL
TYPE	TRAIL NUMBER	REV
BRA-MEE-ZZ-GF-DR-PD-0500		P01