

Technical Note C230100315-PIN-XX-ZZ-RP-C-00021

Planning Responses

Site Van Storage Area, Faraday Road, Knowsley
Prepared by: Morgan Harris & Max Deeble
Checked by: Jawsy Jabbar
Date: 24th May 2023
Status: Version No – 02

Section 1 – Consultee Comments

Pinnacle Consulting Engineers have drafted this technical note to provide some commentary on the consultee response received in relation to our submitted information for application reference 23/00064/FUL.

United Utilities suggested condition dated 11.05.2023.

*“The drainage for the development hereby approved, shall be carried out in accordance with principles set out in the submitted **Flood Risk assessment & Drainage Strategy, Rev P01 - Dated 06.02.2023** which was prepared by Pinnacle Consulting Engineers. For the avoidance of doubt surface water must drain at the restricted rate of 5.55 l/s. **No surface water will be permitted to drain directly or indirectly into the public sewer.** Prior to occupation of the proposed development, the drainage schemes shall be completed in accordance with the approved details and retained thereafter for the lifetime of the development.”*

In respect of the above we would recommend that the condition is updated to refer to an updated revision of the Drainage Strategy -P02 revision document is now available (dated: 06.03.2023).

The condition suggests that no discharge into the public sewer is acceptable however, this is the proposed method of surface water discharge. Discharge of surface water into the public sewer is the same strategy as in a historic application for the site (20/00433/FUL). Furthermore, Pinnacle completed a pre-development enquiry with United Utilities (UU Reference Number: 03691910) that notes that principle in agreement for a connection into the public sewer system at 5.0 l/s is permissible (see Appendix A).

We would therefore suggest the following wording:

*“The drainage for the development hereby approved, shall be carried out in accordance with principles set out in the submitted **Flood Risk assessment & Drainage Strategy, Rev P02 - Dated 06.03.2023** which was prepared by Pinnacle Consulting Engineers. For the avoidance of doubt surface water must drain at the restricted rate of 5.55 l/s. Prior to occupation of the proposed development, the drainage schemes shall be completed in accordance with the approved details and retained thereafter for the lifetime of the development.”*

Lead Local Flood Authority (LLFA) response dated 11.05.2023.

The response from the LLFA includes multiple points listed (i) though to (vi), we note that some of the references are duplicated so the text will be quoted below.

Point (i) from the LLFA is as follows:

“No infiltration test has been undertaken and the proposed drainage design is currently based on an assumption which infiltrating-based SuDS features will not be feasible. Final destination of surface water runoff should be determined based on site characteristics by following the surface water drainage discharge hierarchy. As requested by National Planning Practice Guidance applications should aim to discharge surface water runoff as high up the following hierarchy of drainage options as reasonably practicable:

- into the ground (infiltration)*
- to a surface water body*
- to a surface water sewer, highway drain, or another drainage system, and*
- to a combined sewer.*

*For infiltrating-based methods, **the soakaway test should be completed according to the BRE 365 method and their results should be submitted with the full application.** Should the infiltration rate on site would be sufficient for infiltration-based features, the proposed drainage design should be revisited.”*

The Flood Risk Assessment and Drainage Strategy report prepared by Pinnacle outlines why infiltration has not been proposed as a method of surface water management for the site. The Flood Risk Assessment and Drainage Strategy report notes that BRE365 testing should be conducted. Should infiltration be identified as a viable surface water management option, then the proposed drainage strategy will be revised. We would therefore propose the following condition:

*“Prior to commencement of development (with the exception of site set up and clearance) a detailed drainage strategy shall be submitted to the Local Planning Authority for approval which includes the results of soakaway tests. In the event that soakaway tests identify that the site would be suitable for infiltration-based features the proposed drainage design should include such features. **The detailed drainage strategy shall follow principles set out in the submitted Flood Risk assessment & Drainage Strategy, Rev P02 - Dated 06.03.2023 which was prepared by Pinnacle Consulting Engineers. For the avoidance of doubt, should infiltration testing demonstration infiltration is unsuitable as a method of surface water discharge, surface water draining to the public sewer must drain at the restricted rate of 5.55 l/s**”*

Point (iii) from the LLFA is as follows:

*“The current drainage proposals do not promote water quality, amenity and biodiversity. A SuDS aims to minimise the impacts from a proposed development on water quality and maximise amenity and biodiversity. In designing an appropriate set of SuDS techniques for a development site, the LLFA will therefore be **expecting above ground, green SuDS to be prioritised to promote water quality, amenity and biodiversity unless justification to be provided for positive and underground features. In the current application, neither above ground and green SuDS features proposed nor justification for ruling out these green systems provided.**”*

We acknowledge the point raised by the LLFA. The justification for not including above ground SuDS is 1) the site grading; 2) the site layout. The natural fall of the site does not facilitate the inclusion of SuDS, with the highest levels being in the north, where there is a small area of open space, and lowest in the south, where there is no viable space for above ground SuDS. The site layout provides insufficient space for above ground green SuDS features.

Furthermore, regarding the open space included on the site layout, the area to the north is existing vegetation that includes trees. The area to the east has been discounted as area for above ground SuDS to respect and existing overland flow route from a neighbouring plot.

The proposed surface water strategy has made as many provisions as possible to include SuDS and SuDS features such as catchpit manholes for sediment capture; trapped sumps; attenuation tanks with granular pipe surround distributing system; and SuDS compliant petrol interceptors.

Point (i) from the LLFA is as follows:

“The impact of future urban creep has not been considered.”

The proposed development layout has hardstanding across almost the entire site area and therefore, urban creep was considered an unrealistic inclusion and therefore discounted. There is no further space for the site to develop hardstanding areas.

Points (iii) and (iv) from the LLFA are as follows:

“(iii) Should the pipe design is based on the 1 in 30 year plus the impact of the climate change, full details of hydraulic modelling using the critical duration will be required to demonstrate that the site is free from flooding.

(iv) For events greater than the 1 in 30 year plus the impact of climate change, if the site is allowed to be flooded, full details of hydraulic modelling using the 1 in 100 year event plus climate change under critical duration will be required. This must show which part(s) of the site is flooded, by what depth and whether all flood water will be contained within the site.”

Pinnacle acknowledges these comments from the LLFA and the calculations will be provided in due course as part of the proposed detailed drainage strategy that would form a dischargeable planning condition. A suggested condition is contained above.

Point (i) from the LLFA is as follows:

“No plan showing overland exceedance routes has been provided. A plan showing overland exceedance routes in the event of a failure of the drainage system or storm event in excess of the 1 in 100 + 40% CC storm event will be required. Flow routes need to be considered when all on site drainage systems have been overwhelmed by an event of greater intensity than the design scenario. The impact of exceedance flows from and on adjacent land should also be considered. The duration of flooding, maximum depth and the route of flood flows shall be established and managed so as to mitigate the flood impact to people and property. For the assessment of an exceedance event impact, it would be recommended to consider the 1 in 200 rainfall event plus climate change.”

Pinnacle acknowledges this comment from the LLFA and an exceedance flow plan could be secured through an appropriately worded condition. We would suggest the following:

“Prior to commencement of development (with the exception of site set up and clearance) a flow route exceedance plan shall be submitted to the LPA for approval. The plan shall include a risk assessment for the blockage of pipes and outlet structures.”

Point (ii) from the LLFA is as follows:

“The risk assessment should include for blockage of pipes, blockage of outlet structures and risk of impediments across planned flood routing paths. The application should be supported by a designer’s risk assessment that identifies key points of failure of the system and what means have been engaged to limit risk of failure. This will also inform the maintenance plan with regards to corrective actions needed should a failure occurs.”

Pinnacle acknowledges this comment from the LLFA and the outputs of this risk assessment exercise will be included on the flood exceedance plan as identified in the suggested condition wording above.

Point (iii) from the LLFA is as follows:

“Construction details of the proposed drainage features will be required.”

Pinnacle acknowledges this comment from the LLFA and the details will be provided as part of the detailed drainage strategy which could be secured by the wording suggested above.

Point (iv) from the LLFA is as follows:

“A Management and Maintenance Plan for the sustainable drainage system relating to the lifetime of the development through an appropriate legally binding agreement shall be submitted to and approved in writing by the Local Planning Authority. This shall include: (i) The arrangements for adoption by an appropriate public body or statutory undertaker or details of provision for management and maintenance by a resident’s management company, (ii) Arrangements for inspection and ongoing maintenance of all elements of the sustainable drainage system to secure the operation of the surface water drainage scheme throughout its lifetime, (iii) Details for planned maintenance and a mechanism for remedial and urgent repair works, (iv) Means of access for inspection and maintenance purposes, and (v) The plan shall be implemented in accordance with the timeframes contained within it.”

Pinnacle acknowledges this comment from the LLFA but consider that this could be secured by an appropriately worded conditions as follows:

“Prior to occupation a Drainage Maintenance and Management Plan shall be submitted to the Local Planning Authority for approval. The plan shall include (i) The arrangements for adoption by an appropriate public body or statutory undertaker or details of provision for management and maintenance by a resident’s management company, (ii) Arrangements for inspection and ongoing maintenance of all elements of the sustainable drainage system to secure the operation of the surface water drainage scheme throughout its lifetime, (iii) Details for planned maintenance and a mechanism for remedial and urgent repair works, (iv) Means of access for inspection and maintenance purposes, and (v) The plan shall be implemented in accordance with the timeframes contained within it.”

Section 2 – Proposed Conditions

In addition to responses from the consultees on the planning application, conditions have been proposed which Pinnacle has commented on below.

Condition related to drainage.

“The drainage for the development hereby approved, shall be carried out in accordance with principles set out in the submitted Flood Risk assessment & Drainage Strategy, Rev P02 - Dated 06.03.2023 which was prepared by Pinnacle Consulting Engineers.

For the avoidance of doubt surface water must drain at the restricted rate of 5.55 l/s. No surface water will be permitted to drain directly or indirectly into the public sewer until BRE365 infiltration testing demonstrates that infiltration is an unsuitable method of surface water discharge.

Prior to occupation of the proposed development, the drainage schemes shall be completed in accordance with the approved details and retained thereafter for the lifetime of the development.”

The condition notes that stormwater must be restricted to 5.55 l/s. This aligns with the Flood Risk Assessment and Drainage Strategy document.

Pinnacle questions the sentence stating that no surface water will be permitted to drain directly or indirectly into the public sewer as the entire drainage strategy is based on a connection into the public sewer. The connection is proposed to be made into United Utilities manhole reference 7203, as can be seen in Appendix D of the Flood Risk Assessment and Drainage Strategy report submitted to planning.

A pre-development enquiry with United Utilities (UU Reference Number: 03691910) states that a maximum of 5.0 l/s will be permissible into the public sewer network. Pinnacle proposes that the rate of 5.0 l/s is challenged and that it is uplifted to 5.55 l/s to align with the drainage strategy as the 5.55 l/s discharge rate is based on the QBAR greenfield runoff rate for the plot and has been supported by calculations.

As mentioned above, BRE365 infiltration testing is required by the LLFA and the results of the testing will be provided to United Utilities to confirm to them that infiltration is not a viable method of surface water management and enable them to formally confirm that a connection into the public sewer is permissible.

An alternative wording of condition has been suggested above which incorporates these comments.

Condition related to drainage management.

"Prior to occupation of the development a sustainable drainage management and maintenance plan for the lifetime of the development shall be submitted to the local planning authority and agreed in writing. The sustainable drainage management and maintenance plan shall include as a minimum:

- a) Arrangements for adoption by an appropriate public body or statutory undertaker, or, management and maintenance by a resident's management company; and*
- b) Arrangements for inspection and ongoing maintenance of all elements of the sustainable drainage system to secure the operation of the surface water drainage scheme throughout its lifetime.*

The development shall subsequently be completed, maintained and managed in accordance with the approved plan."

Pinnacle acknowledge the above comments and, as noted above, a document outlining the proposed drainage maintenance requirements will be provided in due course. An alternative wording of condition has been suggested above however, the above condition would also be acceptable.

Appendix A – United Utilities Pre-Development Enquiry

Morgan Harris

From: seweradoptions@uuplc.co.uk
Sent: 10 March 2023 15:31
To: Morgan Harris
Cc: Oliver Matthews; Simon Tucker
Subject: Pre Development Enquiry for: Knowsley - Operational Vehicle Storage Faraday Road, Knowsley, L33 7UT UU Reference Number : 03691910

Follow Up Flag: Follow up
Flag Status: Flagged

Good afternoon Morgan,

Pre Development Enquiry for: Knowsley - Operational Vehicle Storage Faraday Road, Knowsley, L33 7UT UU Reference Number : 03691910

We have carried out an assessment of your application which is based on the information provided. This pre-development advice on your drainage strategy will be valid for 12 months. Your drainage strategy will need to be reviewed by other competent authorities as part of the planning process, and we advise that you carry out the necessary site investigations to confirm the viability of your proposals.

If your investigations require access to our public sewer network, we ask that you contact our network engineers with a request for an access certificate via our main contact telephone number 0345 6723 723 or refer to the link below:

<https://www.unitedutilities.com/builders-developers/working-near-our-assets/>

Foul Water

Foul flow from this site will be allowed to drain into the public foul water/combined sewer system.

United Utilities would not object to your foul water proposals.

In accordance with our infrastructure plans we may ask you to change your point of connection. Therefore please contact us when you are ready to formalise your drainage proposals, we would suggest before you submit for Full Planning.

Surface Water

All surface water flow from the proposed development should drain in-line with the drainage hierarchy, as outlined in Paragraph 80, (Reference ID: 7-080-20150323), of the National Planning Practice Guidance. We also recommend you prioritise the use of multi-functional sustainable drainage systems for the management of surface water in accordance with national planning policy.

Generally, the aim should be to discharge surface run off as high up the following hierarchy of drainage options as reasonably practicable.

This is outlined as follows, in order of priority:

1. **into the ground (infiltration);**
2. **to a surface waterbody;**
3. **to a surface water sewer or highway drain;**
4. **to a combined sewer.**

For guidance, The [North West SuDS Pro-Forma](#) provides information on the appropriate evidence required at each stage of the hierarchy, to demonstrate how each level has been discounted.

The Lead Local Flood Authority has responsibility for all surface water drainage concerns and their input to your proposal is critical. You should also consider whether it is necessary to discuss your proposal with the Environment Agency, or Internal Drainage Board (if operating in your area).

The Local Planning Authority are the determining authority for any application for planning permission and the appropriate authority for determining cost viability of a proposed drainage scheme, such assessments are outside of

the jurisdiction of United Utilities.

Infiltration

Thank you for providing evidence that infiltration is unviable onsite.

Waterbody

If an evidence based assessment has been carried out and confirms that infiltration is not feasible, we recommend that you contact the Lead Local Flood Authority and/or Environment Agency to discuss a point of discharge to the drain located in the site boundary of the proposed site.

We would encourage you to identify and engage with any third party landowner and riparian owner to agree access and discharge rights to the water body if this is not in your ownership.

Highway Drainage

If an evidence based assessment has been carried out and confirms that infiltration is not feasible, we recommend that you investigate the possibility of draining surface water to the highway drain where this ultimately discharges to a watercourse, by contacting the relevant Highway Authority.

Public Sewer

In accordance with the hierarchy of drainage options within the National Planning Practice Guidance, both discharge to ground via infiltration and discharge to a waterbody should be discounted prior to consideration of discharging surface water to the public sewer system. Evidence should be provided to demonstrate how these have been discounted, as outlined in the North West SuDS pro-forma.

Once evidence is provided as outlined above, United Utilities will consider the proposed connection to the 225mm diameter public surface water sewer located North of the proposed site at a pass forward flow to be agreed by the Lead Local Flood Authority. United Utilities request that any agreed rate does not exceed 5l/s.

As a Water Company, we have no obligation to accept highway drainage into our public sewer network. However, should your proposals include runoff from highways, we would request that consideration is given to SuDS components that deliver source control are incorporated within the design of the scheme to reduce the volume and frequency of discharges of these flows to the public sewer.

Levels

For low-lying sites, (where the ground level of the site or the level of a basement is below the ground level at the point where the drainage connects to the public sewer), care should be taken to ensure that the property is not at increased risk of flooding. If these circumstances exist, we recommend that you contact us to discuss further. It could affect the detailed design of your site and result in the need to incorporate appropriate mitigating measures in your drainage scheme.

Land drainage / Overland flows / track drainage

United Utilities have no obligation, and furthermore we do not accept land drainage, overland flows or track drainage into the public sewerage network under any circumstances

Existing Wastewater Assets Crossing the Site

We have reviewed our records and can confirm that there does not appear to be any charted public sewers located within the boundary of proposed development. However, due to the accuracy of the records and the public sewer transfer legislation in 2011, not all public sewers are shown on our records so we would ask that you proceed with caution and carry out your own site investigation works. If any uncharted sewers are identified while carrying out your works we would ask that you contact United Utilities at the earliest opportunity so that we can offer guidance and update our records.

Existing Water Assets Crossing the Site

It is the developer responsibility to identify utilities on-site. Where clean water assets are shown on our records, we recommend that you contact our Water Pre-Development Team, via the following email address:

DeveloperServicesWater@uuplc.co.uk. Further information for this service can be found on our website via the link below:

<https://www.unitedutilities.com/builders-developers/larger-developments/pre-development/water-pre-dev/>

Connection Application

Although we may discuss and agree discharge points and 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/sewer-connections/sewer-connection/>

We recommend that the detailed design should confirm the locations of all utilities in the area and ensure that any proposed drainage solution considers routing and clash checks where required.

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

Sewer Adoptions

You have indicated on your application form that you intend to put the sewers forward for adoption (including any SuDS components that can come within the meaning of a sewer).

United Utilities assess adoption applications based on the current Design & Construction Guidance and local practices which have now replaced 'Sewers For Adoption 6th Edition'.

We recommend that you submit a pre design assessment to the sewer adoption mailbox

(SewerAdoptions@uuplc.co.uk) stating pre design assessment in the title

Please refer to links below to obtain further guidance:

<https://www.unitedutilities.com/builders-developers/larger-developments/wastewater/sewer-adoptions/>

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.

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 set out in the Design & Construction Guidance. The proposed design should give consideration to long term operability and give United Utilities a safe and cost effective proposal for the lifetime of the assets. In these cases, we strongly recommend that no construction commences until the detailed drainage design, submitted as part of the Section 104 application, has been assessed and accepted in writing by United Utilities. Any work carried out prior to the technical assessment being approved is done entirely at the developer's own risk and could be subject to change.

SuDS

If your development proposal incorporates any SuDS component(s) which interact with a sewer network you plan on offering for adoption to United Utilities; contact should be made with our technical team at your earliest convenience, please complete the 'Section 104 pre-application form : ' and include as much relevant detail as you can. These discussions can help prevent delays later in the development process.

Section 104 Pre application form (1b)

As per the sewerage sector guidance, all SuDS should be designed in accordance with the standards within the Design & construction guidance & the CIRIA SuDS manual (C753)

Codes For Adoption

The new Codes for Adoption are outlined on the Water UK Website. The link below takes you to their webpage:

<https://www.water.org.uk/technical-guidance/developers-services/codes-for-adoption/>

A free copy of the new Design & Construction Guidance can be downloaded via the link below:

<https://www.water.org.uk/sewerage-sector-guidance-approved-documents/>

Many thanks and kind regards,



Ashleigh Bellerby
Assistant Developer Engineer
Developer Services & Metering
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----- Original Message -----

From: Morgan Harris [morgan.h@ukpinnacle.com]

Sent: 01/03/2023 14:49

To: seweradoptions@uuplc.co.uk

Cc: simon.t@ukpinnacle.com; oliver.m@ukpinnacle.com

Subject: RE: 03691910 Knowsley - Operational Vehicle Storage Faraday Road, Knowsley, L33 7UT

EXTERNAL EMAIL This email originated outside of the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Good afternoon Jill,

Thank you for your informative and helpful email. I look forward to hearing from you colleague Ashleigh in due course.

Kind regards

Morgan Harris
Flood Risk Engineer

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From: seweradoptions@uuplc.co.uk <seweradoptions@uuplc.co.uk>
Sent: Wednesday, March 1, 2023 12:33 PM
To: Morgan Harris <morgan.h@ukpinnacle.com>
Subject: 03691910 Knowsley - Operational Vehicle Storage Faraday Road, Knowsley, L33 7UT

Hi Morgan

PRE DEVELOPMENT APPLICATION AT: – UU Ref 03691910

Please accept this email as receipt of your application received on 28.2.2023 for the above development. This has now been logged on our system and the job reference is 03691910 we would ask that you quote this reference in all future correspondence.

I have reviewed your application (and attachments) and can confirm this is suitable to be passed to Ashleigh Bellerby for technical assessment. You will receive their response within 8 working days.

Kind regards Jill



Jill Ellis
Customer Advisor Advanced
Developer Services & Metering
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