



Clover House
Western Lane
Odiham
Hampshire
RG29 1TU
Tel: 01256 703355

MT/5970

8th May 2024

Universal Services
The Castle
Winchester
SO23 8UD

Dear Thomas

Re: Fowley Cottage, Emsworth (LPA Ref: APP/23/01078)

I write with regard to the above referenced scheme and to provide a written response to the matters raised by the Lead Local Flood Authority (LLFA) in their consultation response dated 20th February 2024.

The consultation comments are enclosed however in summary, the LLFA has requested the following additional information:

- Confirmation of sufficient existing capacity in the surface water sewer and allowable discharge rates into the sewer; or
- Provision of a new private surface water sewer and sufficient storage for if the outfall is submerged.
- Flow control orifices to be larger to reduce the risk of blockages (>50mm).
- Revised calculations/layout as necessary.
- Flood exceedance flow routes on a plan.
- A full assessment of suitable mitigation for the runoff pollution hazard.
- Maintenance information for all parts of the drainage system is required, including flow control devices and any additional SuDS required.

The additional information requested by the LLFA has been provided within this letter. Each matter raised by the LLFA has been addressed in turn.

Confirmation of sufficient capacity in the surface water sewer, and allowable discharge rates; or provision of a new private surface water sewer and sufficient storage if the outfall is submerged

The surface water sewer that crosses the site is the responsibility of Southern Water. Southern Water has submitted consultation comments (dated 21st February 2024) advising that the proposed surface water discharge can be permitted. The additional information requested by Southern Water will be supplied when an application to connect is made.

The Southern Water consultation comments are enclosed for reference.

Flow control orifices to be larger to reduce the risk of blockages (>50mm)

All carriageway and parking areas will utilise permeable surfacing (i.e. resin bound gravel) which will allow surface water to pass through the structural layers where it will then be conveyed to the storage tanks.

Given the lack of infiltration at this site, this will be a 'Type C' system as per the SuDS Manual.

The risk of blockage will therefore be close to zero as all detritus that could potentially lead to blockages will be filtered through the layers above. All larger items, such as leaves, will remain on the surface of the carriageway for example.

Nevertheless, the scheme has been revised to address comments from other consultees (discussed later) these changes have resulted in a single attenuation tank with a 70mm orifice plate.



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Revised calculations/layout as necessary

To address other consultation comments, amendments have been made to the proposed layout, particularly to limit the works within the root protection areas of the retained trees within the site. The proposed drainage strategy has been updated accordingly and is enclosed.

The strategy has been simplified to incorporate a single attenuation tank. The development incorporates permeable surfacing (Type C) which will convey surface water to the storage area, prior to being discharged to the surface water sewer at the rate previously agreed with Southern Water.

Flood exceedance flow routes on a plan

As requested by the LLFA, a plan showing the exceedance flow routes has been prepared and is enclosed.

This shows that during an exceedance event, surface water flows will follow the route of the proposed carriageway demonstrating that the development will remain safe.

A full assessment of suitable mitigation for the runoff pollution hazard

Water quality management of surface water should be carried out in accordance with the CIRIA SuDS Manual specifically Part E of Chapter 26. Table 26.2 of the SuDS Manual provides the pollution hazard indices for different land use classifications.

Based on the guidance in Table 26.2, the land use classification for the surface water drainage for the scheme will be *residential roofs* and *low traffic roads*. The pollution hazard indices for these land uses are as summarised in Table 1.

Table 1: Pollution Hazard Indices

Land Use	Pollution Hazard Level	Total Suspended Solids	Metals	Hydrocarbons
Residential Roofs	Very Low	0.2	0.2	0.05
Low Traffic Roads	Low	0.5	0.4	0.4

All runoff from the proposed carriageway areas and roof areas will be directed to the subbase of the proposed carriageway which will provide sufficient treatment for the roof water runoff. The treatment provided by a permeable pavement is summarised in Table 2.

Table 2: Indicative SuDS Mitigation Indices

Type of SuDS Component	Total Suspended Solids	Metals	Hydrocarbons
Permeable Pavement	0.7	0.6	0.7

Maintenance information for all parts of the drainage system is required, including flow control devices and any additional SuDS required

As requested by the LLFA, maintenance information has been provided for the flow control device and additional SuDS which in this instance is the permeable paving.

Flow control device

The vortex flow control device requires no power and operates entirely automatically.

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However, the vortex flow control chamber should be inspected every 3 months, along with the adjacent silt trap to ensure it is free of debris and sediment.

A handle fixed to the chamber rim can be operated from ground level to open a panel on the device if it needs to be jetted free of debris.

Permeable pavement

The maintenance regime for the permeable pavements is set out in Table 3.

Table 3: Maintenance Regime (Permeable Pavements)

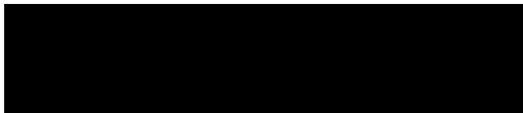
Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface)	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observations of clogging or manufacturer's recommendations – pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is most likely to collect the most sediment
Occasional Maintenance	Stabilise and mow contributing and adjacent areas	As required
	Removal of weeds or management using glyphosphate applied directly into the weeds by an applicator rather than spraying	As required – once per year on less frequently used pavements
Remedial Actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50mm of the level of the paving	As required
	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material	As required
	Rehabilitation of surface and upper substructure by remedial sweeping	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Initial inspection	Monthly for three months after installation
	Inspect for evidence of poor operation and/or weed growth – if required, take remedial action	Three monthly, 48 hrs after large storms in first six months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

I trust the additional information included within this letter will allow the LLFA to issue a positive recommendation for the scheme.



Page 4: Fowley Cottage, Emsworth

Yours sincerely



Matt Twinberrow BEng MCIHT
Associate Director
Bellamy Roberts



Enclosed:

LLFA Consultation Comments (dated 20th February 2024)

Southern Water Consultation Comments (dated 21st February 2024)

Proposed Drainage Strategy (5970/005 Rev. D)

Exceedance Flow Plan (5970/007)



Hampshire County Council

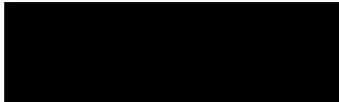
Universal Services
The Castle
Winchester, Hampshire SO23 8UD

Tel: 0300 555 1375
Fax 01962 847055
www.hants.gov.uk

Enquiries to

Thomas Callaway

Direct Line



Date

20 February 2024

My reference

SWM/2024/0067

Your reference

APP/23/01078

Email

swm.consultee@hants.gov.uk

Dear Sir/Madam,

Demolition of existing dwelling and replacement with 4No. 2bed, 8No. 3bed and 3No. 4bed dwellings. at Fowley Cottage, 46 Warblington Road, Emsworth, PO10 7HH(Application No. APP/23/01078)

Hampshire County Council as Lead Local Flood Authority has provided comments in relation to the above application in our role as statutory consultee on surface water drainage for major developments.

This response does not reflect the position of Hampshire County Council as the Highway Authority. If there is a potential for the drainage features to be offered for adoption, this will need to be discussed separately with Highways development planning as they might not be considered acceptable by the Highway Authority.

In order to assist applicants in providing the correct information to their Local Planning Authority for planning permission, Hampshire County Council has set out the information it requires to provide a substantive response at <https://www.hants.gov.uk/landplanningandenvironment/environment/flooding/planning>

The County Council has reviewed the following documents relating to the above application:

- Flood Risk Assessment (Bellamy Roberts, 22/12/23)

The site is predominantly in Flood Zone 1, with a tidal flood risk at the southern part of the site which is in Flood Zone 2 and 3. The Environment Agency should be consulted. The site is at very low risk of flooding from surface water.

Director of Universal Services
Patrick Blogg

The drainage strategy is to attenuate runoff and discharge it to an existing surface water sewer, as infiltration testing did not show favourable infiltration rates.

No details have been provided of any agreement to connect to the sewer. The sewer discharges directly to the sea from this location, however no details of existing capacity or allowable discharge rate have been provided. The flow control devices are potentially small enough to be at regular risk of blockages. Vortex flow control devices should be considered to ensure a larger orifice size.

An alternative solution would be to provide a new private outfall directly to the sea. This would not need any agreements with sewerage undertakers or flow restrictions. Consideration of a surcharged outfall and the effect on necessary attenuation storage would be required.

Flood exceedance flow routes should be shown on a plan, demonstrating that the development remains safe if the surface water drainage system fails.

Gullies, pipework and tanks do not provide sufficient treatment of the runoff. Further consideration of suitable mitigation is required.

Maintenance information has been considered for tanks only.

In order for us to provide a substantive response, the following information is required:

- Confirmation of sufficient existing capacity in the surface water sewer, and allowable discharge rates into the sewer; or
- Provision of a new private surface water sewer and sufficient storage for if the outfall is submerged.
- Flow control orifices to be larger to reduce the risk of blockages (>50mm).
- Revised calculations/layout as necessary.
- Flood exceedance flow routes on a plan.
- A full assessment of suitable mitigation for the runoff pollution hazard.
- Maintenance information for all parts of the drainage system is required, including flow control devices and any additional SuDS required.

We require this further information before we can make a decision on whether to recommend to the Local Planning Authority that planning permission is granted.

As a statutory consultee, the County Council has a duty to respond to consultations within **21 days**. The 21 day period will not begin until we have received sufficient information to enable us to provide a meaningful response.

Please ensure all data is sent to us via the relevant Local Planning Authority.

If you require additional guidance on providing the correct information, we recommend you use our **Surface Water Management Pre-application service** which will enable discussions with the reviewing engineer and scope out works that would address the points raised. For full details, please visit:

<https://www.hants.gov.uk/landplanningandenvironment/environment/flooding/planning> and click on [pre-application advice request form](#).

This response has been provided using the best knowledge and information submitted by the applicant as part of the planning application at the time of responding and is reliant on the accuracy of that information.

Yours faithfully,



Thomas Callaway
Senior FWM Project Officer

General guidance for the application

It is important to ensure that the long-term maintenance and responsibility for Sustainable Drainage Systems is agreed between the Local Planning Authority and the applicant before planning permission is granted. This should involve discussions with those adopting and/or maintaining the proposed systems, which could include the Highway Authority, Planning Authority, Parish Councils, Water Companies and private management companies.

For SuDS systems to be adopted by Hampshire Highways it is recommended that you visit the website at:

<https://www.hants.gov.uk/transport/developers/constructionstandards> for guidance on which drainage features would be suitable for adoption.

Where the proposals are connecting to an existing drainage system it is likely that the authorities responsible for maintaining those systems will have their own design requirements. These requirements will need to be reviewed and agreed as part of any surface water drainage scheme.



Department of Planning and Development
Havant Borough Council
Public Service Plaza
Civic Centre Road
Havant
Hampshire
PO9 2AX

Your ref
APP/23/01078

Our ref
DSA000031217

Date
21 February 2024

Contact
Tel 0330 303 0119

Dear Sir/Madam,

Proposal: Demolition of existing dwelling and replacement with 4No. 2bed, 8No. 3bed and 3No. 4bed dwellings.

Site: APP/23/01078: - Fowley Cottage, 46 Warblington Road, Emsworth, PO10 7HH.

Thank you for your letter dated 31 January 2024.

Following the review of the submitted documents, we have the below comments for the Planning consultation.

Protection of Public Apparatus

The amended drainage layout (5970/005 Rev-A) shows protection measures (Easement) 3 meters on either side of the 300 mm public foul sewer which is satisfactory to Southern Water.

However, for the 450mm public surface water sewer the plots near ST1 are inside the highlighted 3.5 meters easement and this is not satisfactory to Southern Water. The public surface water sewer requires a clearance of 3.5 meters on either side of the gravity sewer to protect it from construction works and to allow for future maintenance access.

We have restrictions on the proposed tree planting adjacent to Southern Water sewers, rising mains or water mains and any such proposed assets in the vicinity of existing planting. Reference should be made to Southern Water's publication "A Guide to Tree Planting near water Mains and Sewers" (southernwater.co.uk/media/3027/ds-tree-planting-guide.pdf) and the Sewerage Sector Guidance (water.org.uk/sewerage-sector-guidance-approved-documents/) with regards to any landscaping proposals and our restrictions and maintenance of tree planting adjacent to sewers, rising mains and water mains.

It is possible that a sewer now deemed to be public could be crossing the development site. Therefore, should any sewer be found during construction works, an investigation of the sewer will be required to ascertain its ownership before any further works commence on site.

Southern Water, Southern House, Yeoman Road, Worthing, West Sussex, BN13 3NX
southernwater.co.uk

Southern Water Services Ltd, Registered Office: Southern House, Yeoman Road, Worthing, West Sussex, BN13 3NX Registered in England No. 2366670



In order to protect public sewers, Southern Water requests that if consent is granted, the following condition is attached to the planning permission; The developer must agree with Southern Water, prior to commencement of the development, the measures to be taken to protect the public sewers.

Foul and Surface Water Drainage

Southern Water requires a formal application for a connection to the public foul sewer to be made by the applicant or developer.

To make an application visit Southern Water's Get Connected service: developerservices.southernwater.co.uk and please read our New Connections Charging Arrangements documents which are available on our website via the following link: southernwater.co.uk/developing-building/connection-charging-arrangements

The submitted drainage strategy indicates utilization of existing connections to the public surface water sewers with a reduced flow being discharged to the surface water network. This discharge can be permitted, if proven to be connected and it is ensured that there is no overall increase in flows into the surface water system. The applicant will be required to provide a topographical site survey and/or a CCTV survey showing the existing connection points, pipe sizes, gradients and calculations confirming the proposed flow will be no greater than the existing contributing flows.

The supporting documents make reference to drainage using Sustainable Drainage Systems (SuDS).

Under certain circumstances SuDS will be adopted by Southern Water should this be requested by the developer. Where SuDS form part of a continuous sewer system, and are not an isolated end of pipe SuDS component, adoption will be considered if such systems comply with the latest Design and Construction Guidance (Appendix C) and CIRIA guidance available here:

water.org.uk/sewerage-sector-guidance-approved-documents/

ciria.org/ItemDetail?iProductCode=C753F&Category=FREEPUBS

Where SuDS rely upon facilities which are not adoptable by sewerage undertakers the applicant will need to ensure that arrangements exist for the long-term maintenance of the SuDS facilities. It is critical that the effectiveness of these systems is maintained in perpetuity. Good management will avoid flooding from the proposed surface water system, which may result in the inundation of the foul sewerage system.

Thus, where a SuDS scheme is to be implemented, the drainage details submitted to the Local Planning Authority should:

- Specify the responsibilities of each party for the implementation of the SuDS scheme.
- Specify a timetable for implementation.
- Provide a management and maintenance plan for the lifetime of the development.

This should include the arrangements for adoption by any public authority or statutory undertaker and any other arrangements to secure the operation of the scheme throughout its lifetime.



We request that should this application receive planning approval, the following condition is attached to the consent: “Construction of the development shall not commence until details of the proposed means of foul and surface water sewerage disposal have been submitted to, and approved in writing by, the Local Planning Authority in consultation with Southern Water.”

Adoption of Sewerage System

This initial assessment does not prejudice any future assessment or commit to any adoption agreements under Section 104 of the Water Industry Act 1991. Please note that non-compliance with the Design and Construction Guidance will preclude future adoption of the foul and surface water sewerage network on site. The design of drainage should ensure that no groundwater or land drainage is to enter public sewers.

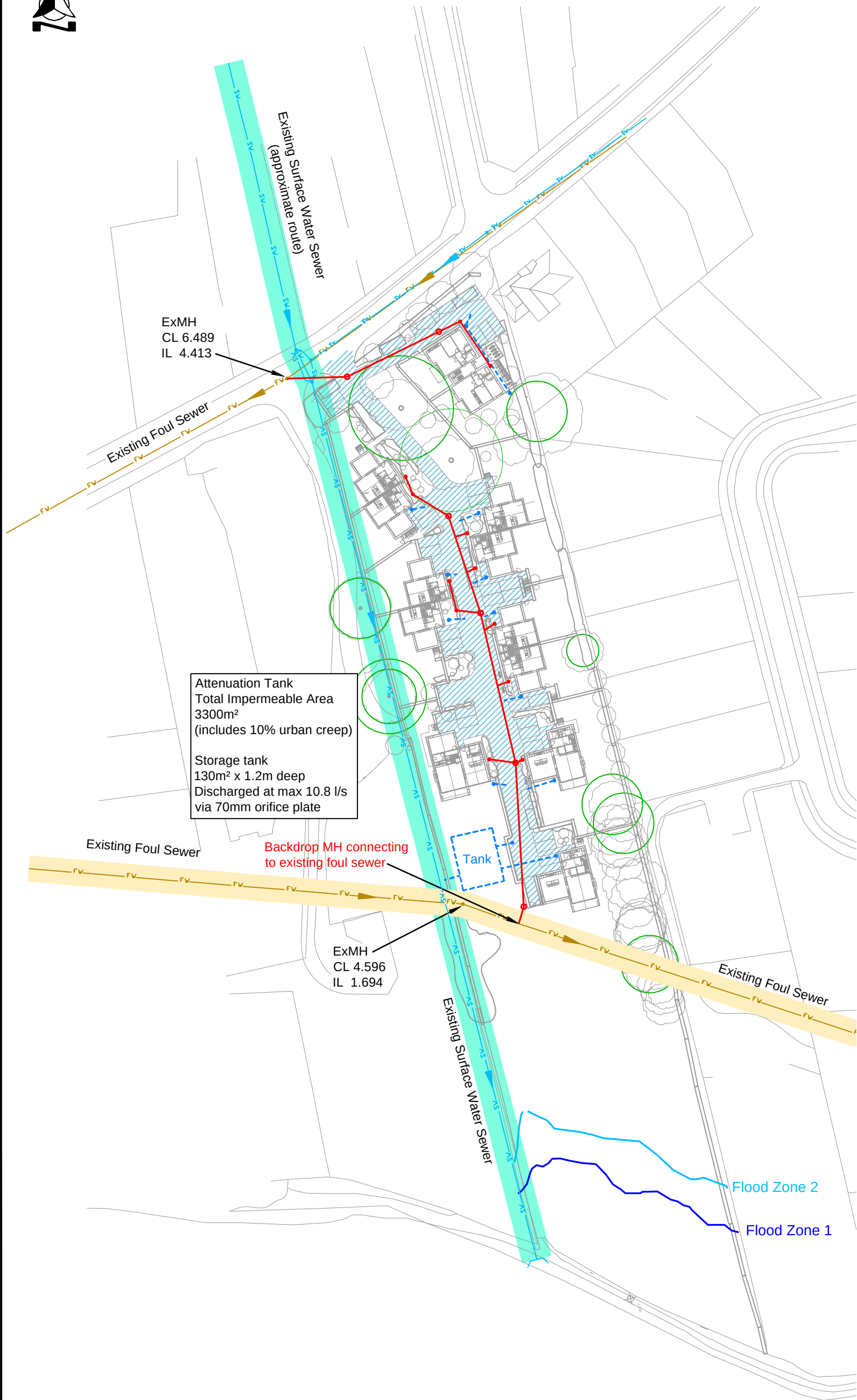
For further advice, please contact Southern Water, Southern House, Yeoman Road, Worthing, West Sussex, BN13 3NX (Tel: 0330 303 0119).

Website: southernwater.co.uk or by email at: SouthernWaterPlanning@southernwater.co.uk

Yours faithfully,

Future Growth Planning Team
Developer Services

southernwater.co.uk/developing-building/planning-your-development



Notes

This drawing shall be read in conjunction with all other relevant Engineering, Architectural, Landscaping details, drawings and specifications and all relevant Highway Authority Plans.

Any works constructed prior to technical approval are at the contractors own risk.

All levels to be checked prior to any works undertaken. Existing surface water sewer along Warblington Road to be identified to ensure new proposed foul sewer doesn't conflict with any existing pipes.

Drainage calculations for soak-aways to Digest 365 have been undertaken by Ground & Water which has indicated that the existing ground make up is unsuitable for any type of infiltration.

Storage tanks for all plots have been calculated using Microdrainage and are designed to 1 in 100 yr storm plus 45% for climate change and discharge into the nearby existing surface water sewer controlled via orifice plates, restricted to a maximum 10.9l/s as indicated in the Qbar calculations.

- Key**
- 3.5m stand-off distance for surface water system
 - 3m stand-off distance for foul water system
 - Permeable surfacing
 - Surface water sewer
 - Surface water storage tank
 - Foul water sewer
 - Root protection areas

D	Drainage revised	MB	MT
C	Site updated, drainage revised	MB	MT
B	Site updated	MB	MT
A	Site layout revised, drainage strategy updated	JCB	MT
REVISION	AMENDMENT	DRN	CHK



Bellamy Roberts
Clover House
Western Lane
Odiham
Hampshire, RG29 1TU
Tel: 01256 703355
Email: info@bellamyroberts.co.uk

CLIENT
Premier Coastal Properties Ltd.

PROJECT
Warblington Road, Emsworth

TITLE
Foul and Surface Water Drainage Strategy

DRAWN BY JCB	DESIGN BY JCB	CHK BY MT
DATE 26/10/23	DRAWING No. 5970 / 005	REV No. D
SCALE 1:1000 @ A3		



Notes

This drawing shall be read in conjunction with all other relevant Engineering, Architectural, Landscaping details, drawings and specifications and all relevant Highway Authority Plans.

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Key

 Flood exceedance route



Bellamy Roberts
Clover House
Western Lane
Odiham
Hampshire, RG29 1TU
Tel: 01256 703355
Email: info@bellamyroberts.co.uk

CLIENT
Premier Coastal Properties Ltd.

PROJECT
Warblington Road, Emsworth

TITLE
Exceedance Flow Plan

DRAWN BY MB	DESIGN BY -	CHK BY MT
DATE 03/05/24	DRAWING No. 5970 / 007	REV No.
SCALE 1:1000 @ A3		