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County Hall
Chichester
West Sussex
PO19 1RH



Lead Local Flood Authority

James Neave
West Sussex County Council
County Hall
Chichester
West Sussex
PO19 1RH

Date 25 July 2023

Dear Mr Neave,

RE: WSCC/021/23 - Recycle Southern Ltd, Elbridge Farm Chichester Road, Bognor Regis, PO21 5EF

Thank you for your consultation on the above site, received on 05 June 2023. We have reviewed the application as submitted and wish to make the following comments.

This application is for the regularisation, consolidation and extension to the existing waste transfer facility including an increase in throughput of waste at Recycle Southern Ltd, Elbridge Farm Chichester Road, Bognor Regis, PO21 5EF.

We are concerned that the drainage strategy has not fully considered the use of infiltration to discharge surface water from the site and further calculations are required to demonstrate how surface water will be managed on site before discharging to the Elbridge River.

We **object** to this planning application in the absence of an acceptable Drainage Strategy relating to:

- The need for a more detailed assessment of the potential for infiltration from the site.
- Inadequate assessment of any likely impacts of flooding from the increase in impermeable areas (greenfield runoff rates and drainage calculations).
- The need for a more detailed layout showing the storage capacity of proposed SuDS features and connections.
- The development does not currently complying with current NPPF, PPG or local policies in respect of the above.

Reason

To prevent flooding in accordance with National Planning Policy Framework paragraph 167, 169 and 174 by ensuring the satisfactory management of local flood risk, surface

water flow paths, storage and disposal of surface water from the site in a range of rainfall events and ensuring the SuDS proposed operates as designed for the lifetime of the development.

We will consider reviewing this objection if the issues highlighted on the accompanying Planning Application Technical Response document are adequately addressed.

Erection of flow control structures or any culverting of an ordinary watercourse requires consent from the appropriate authority, which in this instance is West Sussex Lead Local Flood Authority. It is advised to discuss proposals for any works at an early stage of proposals.

In December 2022 it was announced FEH rainfall data has been updated to account for additional long term rainfall statistics and new data. As a consequence, the rainfall statistics used for surface water modelling and drainage design has changed. In some areas there is a reduction in comparison to FEH2013 and some places an increase (see [FEH22 - User Guide \(hydrosolutions.co.uk\)](https://www.hydrosolutions.co.uk/FEH22-User-Guide)). Any new planning applications that have not already commissioned an FRA or drainage strategy to be completed, should use the most up to date FEH22 data. Other planning applications using FEH2013 rainfall, will be accepted in the transition period up to the 1st April 2023. This includes those applications that are currently at and advanced stage or have already been submitted to the Local Planning Authority. For the avoidance of doubt the use of FSR and FEH1999 data has been superseded by FEH 2013 and 2022 and therefore, use in rainfall simulations are not accepted.

Yours sincerely

Flood Risk Management Team

Annex

The following documents have been reviewed, which have been submitted to support the application;

- Flood Risk Assessment and Surface Water Drainage Strategy, by Hafren Water, April 2023, Final Version F2.

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FULL APPLICATION	Related Policy or Standard	Applicant Action Required	LLFA Specific Comment
All sources of flooding considered?	NPPF Paragraph 159, 167 PPG Paragraph 051 SDNSTS S10	Provide updated information within an amended FRA on;	The FRA has included adequate information on sources of flood risk
		<input type="checkbox"/> Fluvial flooding from the ordinary watercourse.	Not applicable
		<input type="checkbox"/> Surface water flow path originating offsite.	Not applicable
		<input type="checkbox"/> Groundwater flooding.	Not applicable
		<input type="checkbox"/> Rainwater surcharged sewer flooding.	Not applicable
Mitigation not appropriate	NPPF Paragraph 159, 167 and 168 PPG Paragraph 004, 023, 037, 041, 042, 043 and 044	<input type="checkbox"/> Use sequential approach with the following hierarchy. <ol style="list-style-type: none"> I. how can the development first avoid the risk of flooding II. how will it be mitigated (with evidence) III. how will flood resistance and resilience be employed 	Not applicable
		<input type="checkbox"/> The proposal increases the risk of flooding to existing infrastructure, dwellings or property. Mitigation should be reassessed to show how flood risk can be reduced overall.	Not applicable
		<input type="checkbox"/> Provide information on safe access and egress as part of an emergency plan. Temporary refuge is no longer acceptable.	Not applicable
Long term sustainability of the development	NPPF Paragraph 167 and 168	<input type="checkbox"/> Provide site specific ordinary watercourse or surface water flow path modelling.	Not applicable

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	PPG Paragraph 004, 036, 061, 068 and 069	<input type="checkbox"/> Demonstrate that any residual risk is managed with appropriate flood resistance and resilience measures.	Not applicable
		<input type="checkbox"/> Include evidence of appropriate freeboard to finished floor levels from the design flood level.	Not applicable
		<input type="checkbox"/> Include appropriate climate change allowance for assessment of the lifetime of the development (including the 3.33% AEP design flood event).	Not applicable
		<input type="checkbox"/> Use up to date FEH2022 rainfall data for all design flood events.	Not applicable
		<input checked="" type="checkbox"/> Provide an easement of 3 m from the top bank of any watercourse is required for maintenance.	Objection: The applicant should provide a site plan which shows a 3m easement from the Elbridge Rife adjacent to the site.
		<input checked="" type="checkbox"/> Identification is required of those structures which require consent for works on an ordinary watercourse (from the LLFA), this extends to works required within 8m from the top of the bank (see West Sussex LLFA website).	Objection: Consent is required from the LLFA for works within 8m of the Elbridge Rife.
How does the site currently drain?	NPPF Paragraph 169 PPG Paragraph 059 SDNSTS S1, S2, S3, S4, S5, S6	<input checked="" type="checkbox"/> Evidence required on ground conditions / BRE365 or similar infiltration testing / dissolution potential / seasonally high groundwater levels.	Objection: The Drainage Strategy proposes to discharge to the adjacent Elbridge Rife and infiltrate via the existing permeable surfaces and additional swale, however BRE356 infiltration testing should be carried out to confirm if infiltration is viable. The Drainage Strategy also suggests that an indeterminate

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			amount of infiltration occurs within the French drains, however testing should confirm the infiltration rates to demonstrate how much infiltration contributes to the drainage strategy.
		<input checked="" type="checkbox"/> Greenfield runoff rates and volumes missing.	Objection: Greenfield volumes have not been provided
		<input checked="" type="checkbox"/> Greenfield runoff rates need to be recalculated (incorrect input parameters).	Objection: Evidence should be provided to show that the greenfield runoff rates have been calculated correctly for the full site area.
		<input checked="" type="checkbox"/> Pre-development brownfield runoff rates missing.	Objection: Should be provided.
		<input checked="" type="checkbox"/> Pre-development brownfield runoff rates need to be recalculated (incorrect input parameters).	Objection: Evidence should be provided to show that the brownfield runoff rates have been calculated correctly for the full site area.
		<input checked="" type="checkbox"/> Drawing required to show where existing drainage network and outfall/s are, plus confirmation if will they be retained or removed.	Objection: The Drainage Strategy does not confirm if the outfall will be retained or if a new outfall will be required.
		<input checked="" type="checkbox"/> Drainage survey required to provide evidence of existing discharge rate and condition (may include detailed asset or CCTV survey).	Objection: Should be provided.

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fWhere will the site drain to?	NPPF Paragraph 169 PPG Paragraph 055, 056, 059, 060, 061, 062 and 063 SDNSTS S12, 13 and S14	Drainage location hierarchy has not been followed, further information is required on; <input type="checkbox"/> Evidence why rainwater reuse can't be included.	Not applicable
		<input checked="" type="checkbox"/> Interception has not been calculated and/or provided.	Objection: Interception has not been included within the Drainage Strategy.
		<input type="checkbox"/> Infiltration proposals – re Groundwater Source Protection Zone I restrictions.	Not applicable
		<input checked="" type="checkbox"/> Surface watercourse – does it connect to the wider network and is there permission and agreed access locations for proposed outfalls?	Informative: The applicant should confirm permission and agreed access to discharge to the Elbridge Rife.
		<input type="checkbox"/> Surface water sewer – no in principle agreement from owner of the asset.	Not applicable
		<input type="checkbox"/> Combined sewer – no in principle agreement from owner of the asset.	Not applicable
		<input type="checkbox"/> Full impact assessment of failure and emergency procedures required if a pump is part of the design.	Not applicable
<input type="checkbox"/> Justification is required as to why a deep bore infiltration feature has been proposed prior to shallow infiltration or connection to a surface watercourse.	Not applicable		

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		<input type="checkbox"/> In principle objection - proposing to connect surface water runoff to foul sewer.	Not applicable
		<input type="checkbox"/> Detailed justification required why the application cannot be drained via gravity and a pump is required.	Not applicable
Are the 4 pillars of SuDS provided and are they multifunctional?	NPPF Paragraph 169 PPG Paragraph 036, 055, 056, 059, 060, 061, 062 and 063	<input checked="" type="checkbox"/> The application must provide water quantity benefits in open, at the surface or above ground SuDS.	Objection: A swale has been included within the drainage strategy, however it is not clear how this connects to the network.
		<input type="checkbox"/> The application must provide water quality benefits.	Not applicable
		<input checked="" type="checkbox"/> Appropriate water quality assessment is absent / incorrect.	Objection: The drainage strategy includes an existing oil interceptor, however the applicant should refer to the simple index approach for assessing water quality as per the CIRIA SuDS Manual.
		<input type="checkbox"/> Additional water quality treatment using surface SuDS is required due to the sensitivity of the discharge location (including groundwater, designated surface watercourses or deep infiltration features).	Not applicable
		<input checked="" type="checkbox"/> The application must provide biodiversity benefits or demonstrate why this is not achievable (lack of space will not be accepted).	Objection: Biodiversity has not been considered within the drainage strategy to demonstrate how the Scheme meets the four pillars of SuDS.

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		<input checked="" type="checkbox"/> The application must provide amenity benefits or demonstrate why this is not achievable (lack of space will not be accepted).	Objection: Amenity has not been considered within the drainage strategy to demonstrate how the Scheme meets the four pillars of SuDS.
How will the site drain without adversely effecting flood risk elsewhere?	NPPF Paragraph 167, 169 SDNSTS S2, S3, S4, S5, S6	<input checked="" type="checkbox"/> The most precautionary infiltration rate should be used in the design of the attenuation feature.	Objection: Infiltration rates have not been provided.
		<input checked="" type="checkbox"/> Infiltration rates are shown to be favourable and should be used in the drainage design (where appropriate).	Objection: Infiltration rates have not been provided.
		<input type="checkbox"/> Infiltration storage drainage design should be recalculated to either only discharge through the sides of the structure or apply the appropriate factor of safety.	Not applicable
		<input checked="" type="checkbox"/> Infiltration drainage storage has half drain down time greater than 24 hours and an alternative design or mitigation is required.	Objection: Half drain times have not been provided.
		<input checked="" type="checkbox"/> The post development 100% AEP (or 1 in 1 year) rainfall event runoff rate should also be controlled to the equivalent pre-development rate.	Objection: The pre-development rates have not been provided.
		<input checked="" type="checkbox"/> Proposed discharge rates and volumes are greater than greenfield with no justification.	Objection: The proposed discharge rates should be limited to Qbar or 2l/s/ha
		<input type="checkbox"/> Proposed discharge rates include future allowances for climate change and / or urban creep. These must be	Not applicable

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		removed, and all calculations resubmitted.	
		<input checked="" type="checkbox"/> Require justification and supporting calculations for brownfield % betterment and why this can't be closer to the predevelopment greenfield scenario.	Objection: The proposed discharge rates should be limited to Qbar or 2l/s/ha
		<input type="checkbox"/> Proposed discharged rates would increase flood risk elsewhere and need to be re-assessed.	Not applicable
		<input type="checkbox"/> A minimum runoff rate of 1 to 2 l/s/ha should be applied in groundwater dominated areas.	Not applicable
		<input checked="" type="checkbox"/> How will the development not increase the volume of runoff as only pre and post calculations of greenfield runoff rate have been provided?	Objection: Runoff volumes have not been provided.
		<input checked="" type="checkbox"/> A complex control for runoff rate with long term storage provided, is required, if the drainage proposal is not limiting runoff to QBAR or 2 l/s/ha.	Objection: The proposed discharge rates should be limited to Qbar or 2l/s/ha
		<input checked="" type="checkbox"/> Include appropriate climate change allowance for the lifetime of the development (including 3.33% AEP design) for storage volumes.	Objection: Climate change allowances have not been included for the 3.33% AEP event.
		<input type="checkbox"/> Calculations should be resubmitted and demonstrate how 10% urban creep has been included in the volume of SuDS storage required.	Not applicable

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		<input checked="" type="checkbox"/> Use up to date FEH2022 rainfall parameters in any modelling scenarios.	Objection: The calculations currently use FSR and should be updated to use FEH2022 as FSR significantly underestimates the volume of rainfall.
Location of SuDS		<input checked="" type="checkbox"/> Drawings need to show all the drainage features (storage and conveyance) with labels the same as those in supporting calculations.	Objection: The drainage layout is not labelled and cannot be cross-referenced to the calculations.
		<input type="checkbox"/> Drawings need to show the final design (but not construction issue or preliminary issue).	
		<input checked="" type="checkbox"/> Cross sections and long sections of all the network and structures such as ponds, basins and swales.	Objection: No cross section drawings of the network have been provided.
What is the impact of flood risk on the development?	NPPF Paragraph 169 SDNSTS S7, S8, S9, S10 and S11	Updated supporting calculations required to show;	
		<input checked="" type="checkbox"/> 50% AEP rainfall event does not surcharge in the drainage network.	Objection: The 50% AEP event has not been provided.
		<input checked="" type="checkbox"/> 3.33% AEP rainfall event plus climate change does not flood outside the drainage network which is designed to hold water.	Objection: Climate change allowances have not been included for the 3.33% AEP event.
		<input checked="" type="checkbox"/> 1% AEP rainfall event plus climate change does not leave the application boundary or flood any part of a building, utility plant susceptible to water (e.g. pumping station or substation) within the development boundary.	Objection: A plan should be provided to show where the flooded volume will be held on site from the 1% AEP event plus climate change.
		<input checked="" type="checkbox"/> the appropriate climate change allowance must be included.	Objection: Climate change allowances have not been

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			included for the 3.33% AEP event.
		Additional information is required showing; <input checked="" type="checkbox"/> above ground flooding (extent and depth) at the 1% AEP rainfall event plus climate change must be shown on a drawing with proposed external ground levels and proposed finished floor levels of buildings	Objection: A plan should be provided to show where the flooded volume will be held on site from the 1% AEP event plus climate change.
		<input checked="" type="checkbox"/> above ground flooding (extent and depth) at the 1% AEP rainfall event plus climate change should be designed to be held in the least vulnerable areas of the site e.g. open space.	Objection: A plan should be provided to show where the flooded volume will be held on site from the 1% AEP event plus climate change.
		<input checked="" type="checkbox"/> Flood resistance and resilience must be shown to be included in the design. A minimum of 300mm must be provided between the design flood event and the finished floor level.	Objection: This has not been included within the design.
		<input checked="" type="checkbox"/> A minimum of 150mm above external ground levels and show that they are sloping away from vulnerable areas such as doorways.	Objection: This has not been included within the design.
		<input checked="" type="checkbox"/> Exceedance of the design 1% AEP rainfall event plus climate change (or failure of the drainage network) must be shown on a drawing, minimising impacts to people and property. This drawing will include proposed external ground levels, finished floor levels and any designed slopes on impermeable surfaces such as highways or car parks	Objection: This has not been provided.

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		<input checked="" type="checkbox"/> ½ drain down times need to be submitted and show that they are within 24 hours (or within 48 hours for features that are lined e.g. lined tanks or lined basins).	Objection: Half drain times have not been provided.
		<input checked="" type="checkbox"/> Any drainage network showing storage features with ½ drain down time greater than the 24 hours (or 48 hours for lined structures) must be redesigned to show how it can meet this standard or be increased in size to accommodate a subsequent storm event of 3.33% plus climate change allowance.	Objection: Half drain times have not been provided.
		<input checked="" type="checkbox"/> The drainage calculations must be shown to include a surcharged outfall to a watercourse or sewer. This surcharge level must be the 1% AEP flood event of the receiving watercourse if known or bank full if not already hydraulically modelled.	Objection: This has not been provided.
How will the drainage and watercourse features be managed and maintained?	NPPF Paragraph 169 PPG Paragraph 055, 057 and 058 SDNSTS S10, S11, S12, S13 and S14	<input type="checkbox"/> Details of required maintenance of any SuDS features and structures and who will be adopting these features for the lifetime of the development.	Not applicable
		<input type="checkbox"/> A high-level assessment of how water quantity and water quality will be managed during the construction phase is required. Identifying high level assumptions such as need to discharge to a sewer or watercourse will appropriate pollution measures.	Not applicable

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		<input checked="" type="checkbox"/> Appropriate easements (to the adopting authority standard) to SuDS features should be shown on a drawing, this will be a minimum of 3m.	Objection: The drawings have not included an easement of 3m to the SuDS features.
		<input type="checkbox"/> Vehicular access route and off-road parking needs to be provided to ponds, basins and swales.	Not applicable
		<input checked="" type="checkbox"/> Provide an easement of a minimum of 3 m from the top bank of any watercourse is required for maintenance of the watercourse. This should be on both banks but justification should be provided if access is proposed from only one side of the bank or less than 3m (e.g. 2.5 times the width of any plant likely to be used (from the top of bank with maintenance plant parallel to the watercourse)).	Objection: The applicant should provide a site plan which shows a 3m easement from the Elbridge Rife adjacent to the site.
		<input type="checkbox"/> Due to the likely long duration build out time (including phased development proposals), a construction management plan and supporting calculations and drawings are required to show a timeline of how temporary measures will be put in place to protect the water environment and any newly built SuDS features. This will include any temporary water quality and flow control devices	Not applicable

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Other		<input checked="" type="checkbox"/> Bespoke advice	The calculations show the site divided into 3 catchments. We would request that the applicant provide a drawing layout of the 3 catchments.