
NORTH WEST SuDS PRO-FORMA

This pro-forma is a requirement for any planning application for major development¹.

It supports applicants in summarising and confirming how surface water from a development will be managed sustainably under current and future conditions.

Your sustainable drainage system should be designed in accordance with [CIRIA The SuDS Manual C753](#) and any necessary adoption standards.

HOW TO COMPLETE

Blue Box	Instruction/ Question
Orange Box	Evidence Required
White Box	To be completed by Developer / Consultant

1. Complete ALL white boxes
2. Submit this pro-forma to the Local Planning Authority, along with:
 - Sustainable Drainage Strategy
 - Site Specific Flood Risk Assessment (if required)
 - Minimum supporting evidence, as indicated in orange boxes of this pro-forma.

GUIDANCE TO SUPPORT YOU

The pro-forma should be completed in conjunction with 'Completing your SuDS Pro Forma Guide.'

The pro-forma can be completed using freely available tools such as [Tools for Sustainable Drainage Systems](#) or appropriate industry standard surface water management design software.

¹ as defined in Section 2 of [Statutory Instrument 2015 No. 595](#) or on sites of 0.5 hectares in Critical Drainage Areas.

SECTION 1. APPLICATION & DEVELOPMENT DETAILS

Planning Application Reference <i>(if available)</i>		
State type of planning application <i>i.e. Pre-application, Outline, Full, Hybrid, Reserved Matters*</i> <i>*Information only required if drainage is to be considered as part of reserved matters application</i>	Outline	
Developer(s) Name:	Harlex (RLP Timperley) LLP	
Consultant(s) Name:	Curtins	
Development Address <i>(including postcode)</i>	World Of Water Aquatic Centre, Thorley Lane, Timperley, Altricham	
Development Grid Reference <i>(Eastings/Northings)</i>	X:378865, Y:387895	
Total Development Site Area (Ha)	2.9ha	
Drained Area (Ha)* of Development	1.679	
Please indicate the flood zone that your development is in. Tick all that apply. <i>Based on the Environment Agency Flood Map for Planning and the relevant Local Authority Strategic Flood Risk Assessment (to identify Flood Zones 3a/3b).</i>	Flood Zone 1 <input checked="" type="checkbox"/> Flood Zone 2 <input type="checkbox"/> Flood Zone 3a <input type="checkbox"/> Flood Zone 3b <input type="checkbox"/>	
What is the surface water risk of the site? Tick all that apply. <i>Based on the Environment Agency Surface Water Flood Map.</i>	High <input type="checkbox"/> Medium <input type="checkbox"/> Low <input checked="" type="checkbox"/>	
Have you submitted a Site Specific Flood Risk Assessment (FRA)? <i>See separate guidance notes for clarification on when a FRA is required</i>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Have you submitted a Sustainable Drainage Strategy?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Does your drainage proposal provide multi-functional benefits via SuDS?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Expected Lifetime of Development (years) <i>Refer to Planning Practice Guidance "Flood Risk and Coastal Change" Paragraph 026</i>	50	
Development Type:	Residential development State Proposed Number of Residential Units / Quantum of commercial floorspace	
Greenfield Site • Site is wholly undeveloped, and a new drainage system will be installed	<input type="checkbox"/>	
Previously Developed/ Brownfield Site • Site is already developed, and the <u>entirety</u> of the existing surface water drainage system will be used to serve the new development (evidence must be provided to prove existing surface water drainage system is reusable); <u>OR</u> • Where records of the previously developed system are not available so that the hydraulic characteristics of the system cannot be determined or where the drainage system is not in reasonable working order i.e. broken, blocked or no longer operational for other reasons, then one of the approaches outlined in Section 24.5 of The SuDS Manual (C753) should be adopted.	<input checked="" type="checkbox"/>	

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	Existing (E)	Proposed (P)	Change (P – E)
State Impermeable Area (Ha)	0.848	1.679	0.831
Evidence Required: Plans showing development layout of site with existing and proposed impermeable areas.			<input checked="" type="checkbox"/>

<p>Are there existing sewers, watercourses, water bodies, highway drains, soakaways or filter drains on the site?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Don't Know <input type="checkbox"/></p>
<p>Evidence Required: Plan(s) showing existing layout to include all:</p> <ul style="list-style-type: none"> • Watercourses, open and culverted • Water bodies – ponds, swales etc. • Sewers, including manholes • Highway drains, include manholes, gullies etc. • Infiltration features - soakaways, filter drains etc. 	<p><input checked="" type="checkbox"/></p>

Drainage Design

Outline planning applications should be able to demonstrate that a suitable drainage system is achievable.

All other type of planning application should provide full details or reference to previous planning application where drainage details have been submitted or approved.

Select which design approach you are taking to manage water quantity (refer to Section 3.3 SuDS Manual)	
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32
33	34
35	36
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71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

Approach 1 – Volume control / Long Term Storage (Technical Standards S2/3, S4/5)	<input checked="" type="checkbox"/>
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- The attenuated runoff volume for the 1 in 100 year 6 hour event (plus climate change allowance) is limited to the greenfield runoff volume for the 1 in 100 year 6 hour event, with any additional runoff volume utilising long term storage and either infiltrated or released at 2 l/s/ha
- The discharge rate for the critical duration 1 in 1 year event is restricted to the 1 in 1 year greenfield runoff rate
- The discharge rate for the critical duration 1 in 100 year event (plus climate change allowance) is restricted to the 1 in 100 year greenfield runoff rate

Approach 2 – Qbar (Technical Standards S6)

- *Justification has been provided that the provision of volume control/long term storage is not appropriate and an attenuation only approach is proposed. All events up to the critical duration 1 in 100 year event (plus climate change allowance) are limited to Qbar (1 in 2 year greenfield rate) or 2 l/s/ha, whichever is greater.*

Evidence Required:	
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Plans showing: 

- Existing flow routes and flood risks
- Modified flow routes
- Contributing and impermeable areas
- Current (if any) and proposed 'source control' and 'management train' locations of sustainable drainage components (C753 Chapter 7)
- Details of drainage ownership
- Details of exceedance routes (Technical Standards S9)
- Topographic survey
- Locations and number of existing and proposed discharge points

Note consideration should be given to manage surface water from both impermeable and permeable surfaces (including gardens and verges) likely to enter the drainage system.

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 2.

SECTION 3: PEAK RUNOFF RATES – TECHNICAL STANDARDS S2, S3 AND S6 (UNLESS S1 APPLIES)

Rainfall Event	Existing Rate (l/s)	Greenfield Rate (l/s)	Proposed Rate (l/s) <i>Previously developed sites – In line with S3 should be equivalent to Greenfield runoff rates – discuss with LLFA if this is not achievable pre-application</i>
Qbar (Approach 2)		6.4	6.38
1 in 1 Year Event (Approach 1)		5.55	6.38
1 in 30 Year Event		10.84	6.38
1 in 100 Year Event* (Approach 1)		13.27	6.38
* Total discharge at the 1 in 100 year rate should be restricted to the greenfield runoff volume for the 1 in 100 Year 6 hour event with additional volumes (long-term storage volume) released at a rate no greater than 2 l/s/ha where infiltration is not possible. The climate change allowance should only be applied to the proposed rate and not the existing or greenfield rate.			
Evidence Required:			
Methodology used to calculate peak runoff rate clearly stated and justified.			<input checked="" type="checkbox"/>
Impermeable areas plan, supported by topographical survey confirming positive drainage.			<input checked="" type="checkbox"/>
Hydraulic calculations and details of software used.			<input checked="" type="checkbox"/>

State the hydraulic method used in your calculations
(Refer to Table 24.1 of The SuDS Manual)

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Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 3.

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SECTION 4: DISCHARGE VOLUME – TECHNICAL STANDARDS S4, S5 AND S6 (UNLESS S1 APPLIES)

Rainfall Event	Existing Volume (m ³)	Greenfield Volume (m ³)	Proposed Volume (m ³)
1 In 100 Year 6 Hour Event <i>(Approach 1)</i>			
Does the below statement apply to your development proposal? Long term storage is not achievable on this site and, in accordance with S6 of the Non Statutory Technical Standards for SuDS, the surface water discharge rates for events up to and including the 1 in 100 year critical event are limited to Qbar (Approach 2)			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Evidence Required: Approach to managing the quantity of surface water leaving the site clearly stated and justified Methodology used to calculate discharge volume clearly stated and justified. Hydraulic calculations and details of software used.			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 4.

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SECTION 5: STORAGE – TECHNICAL STANDARDS S7 AND S8

State climate change allowance used (%)	40
State housing density (houses per ha)	44
State urban creep allowance used (%)	10
Evidence Required: State / used in appropriate industry standard surface water management design software.	<input checked="" type="checkbox"/>

State storage volume required (m³) (excluding non-vold spaces) <i>Must include an allowance for climate change and urban creep</i>	
Have you incorporated interception into your design? <i>(Refer to Chapter 24 of The SuDS Manual C753)</i> <i>Where possible, infiltration or other techniques are to be used to try and achieve zero discharge to receiving waters for rainfall depths up to 5mm.</i>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Evidence Required: Drainage plans showing location of attenuation and all flow control devices and supporting calculations.	<input checked="" type="checkbox"/>

Summarise how storage will be provided for 1 in 30 year event on site. <i>Storage must be designed to ensure that at no flooding occurs onsite in a 1 in 30 year event except in designed areas <u>and</u> no flooding occurs offsite in a 1 in 100 year (plus climate change allowance) event.</i>	Within the sewer and an online pond
Summarise how storage will be provided for 1 in 100 year (plus climate change) event on site. <i>Where storage above the 1 in 30 year rainfall event is provided in designated areas designed to accommodate excess surface water volumes, plans showing storage locations and surface water depths and supported by calculations used in appropriate industry standard surface water management design software. It is important to run a range of duration events to ensure the worst case condition is found for each drainage element on the site</i>	within a pond, cellular tank and permeable paving
Evidence Required: Plans showing size and location of storage and supporting calculations. Where there is controlled flooding, extents and depths must be indicated.	<input checked="" type="checkbox"/>

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 5.	071662-CUR-00-XX-RP-D-001-V07_FRA.pdf
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SECTION 6: WATER QUALITY PROTECTION

Contaminated surface water run-off can have negative impacts on the quality of receiving water bodies. The potential level of contamination will influence final the design of an appropriate treatment train as part of your sustainable drainage system.

Is the proposal site known to be or potentially contaminated?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<ul style="list-style-type: none"> If the site is contaminated, it should be demonstrated that the sustainable drainage system will not increase the risk of pollution to controlled waters though the mobilisation of contaminants and/or creation of new pollution pathways. 		

Confirm the Pollution Hazard Level of the proposed development - Tick <u>ALL</u> that apply <i>Refer to Pollution Hazard Indices for different Land Use Classifications in Table 26.2 of The SuDS Manual C753 for further guidance.</i>		
Pollution Hazard Level <i>Tick <u>ALL</u> that apply</i>	Surface water run-off from the proposed development will drain from:	
VERY LOW	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Residential roofs
LOW	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Other roofs (typically commercial/industrial roofs) Individual property driveways, residential car parks, low traffic roads (e.g. cul de sacs, home-zones and general access roads) Non-residential car parking with infrequent change (e.g. schools, offices) i.e. < 300 traffic movements/day
MEDIUM	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Commercial yard and delivery areas Non-residential car parking with frequent change (e.g. hospitals, retail) All roads except low traffic roads and trunk roads/motorways²
HIGH	<input type="checkbox"/>	<ul style="list-style-type: none"> Sites with heavy pollution (e.g. haulage yards, lorry parks, highly frequented lorry approaches to industrial estates, waste sites) Sites where chemicals and fuels (other than domestic fuel oil) are to be delivered, handled, stored, used or manufactured Industrial sites Trunk roads and motorways¹

If the development's Pollution Hazard Level is 'Very Low' or 'Low', has the sustainable drainage design been risk assessed and appropriate mitigation measures included?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> If the proposed development has a very low or low polluting potential, you should design your sustainable drainage system to include an appropriate treatment train in accordance with The SuDS Manual (C753). 		

If the development's Pollution Hazard Level is 'Medium' or 'High', is the application supported by a detailed water quality risk assessment?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<ul style="list-style-type: none"> If the proposed development has a high polluting potential, a detailed risk assessment <u>will</u> be required to identify an appropriate SuDS treatment train and ensure compliance with Paragraph 170 of the National Planning Policy Framework. If the proposed development has a medium polluting potential, a detailed risk assessment <u>may</u> be required depending on the nature, scale and location of the development. 		

Has pre-application advice on water quality been obtained from the Environment Agency?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
If YES, provide details:		

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 6.	071662-CUR-00-XX-RP-D-001-V07_FRA.pdf
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² Motorways and trunk roads should follow the guidance and risk assessment process set out in Highways Agency (2009).

SECTION 7: DETAILS OF YOUR SUSTAINABLE DRAINAGE SYSTEM

a) Function of your Sustainable Drainage System

Do your proposals store rainwater for later use (as a resource)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Evidence Required: Please provide a brief sentence in the adjacent white box to describe how this function has been achieved.	
Do your proposals promote source control to manage rainfall close to where it falls? (e.g. promoting natural losses through soakage, infiltration and evapotranspiration)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Evidence Required: Please provide a brief sentence in the adjacent white box to describe how this function has been achieved.	
Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 7a.	071662-CUR-00-XX-RP-D-001-V07_FRA.pdf

b) Hierarchy of Drainage Options – Planning Practice Guidance

The proposed method of discharge are set out within order of priority. Generally, the aim should be to discharge surface run off as high up the following hierarchy of drainage options as reasonably practicable.

Proposed method of surface water discharge		Is this proposed?	
Hierarchy Level 1: Into the ground (via infiltration)		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
If YES - Evidence Required		If NO – Evidence Required Tick <u>ALL</u> that apply	
<input type="checkbox"/>	A. Completed Infiltration Checklist from The SuDS Manual (C753) Appendix B <i>An editable version of this form is available on SusDrain website.</i>	<input checked="" type="checkbox"/>	A. Site investigation to demonstrate that the ground is not free draining. Test results to be provided in accordance with: <ul style="list-style-type: none"> The methodology within BRE 365 (2016), OR Falling head permeability tests BS EN ISO 22282-2: 2012
<input type="checkbox"/>	B. British Geological Survey (BGS) Infiltration SuDS Map	<input checked="" type="checkbox"/>	B. NOTE: where an applicant is unable to access a site to undertake testing, e.g. where unable to access a site for an outline application, they can submit a SuDS GeoReport or similar.
<input type="checkbox"/>	C. Infiltration testing to BRE 365 (2016) or falling head permeability tests to BS EN ISO 2228-2: 2012 (optional for outline)	<input checked="" type="checkbox"/>	C. Evidence to confirm that infiltration to ground would result in a risk of deterioration to ground water quality.
<input type="checkbox"/>	'Plan B' sustainable drainage plan and statement of approach with an alternative discharge method, in case infiltration proposals are proven not feasible upon further site specific ground investigation e.g. to consider seasonal variations to groundwater.	<input type="checkbox"/>	D. Geotechnical advice from a competent person* which determines that infiltration of water to ground would pose an unacceptable risk of geohazards to the site and/or local area. <i>*Note: Competent person may include a Chartered Engineer, Chartered Geologists, Registered Ground Engineering Professionals (RoGEP).</i>

Proposed method of surface water discharge		Is this proposed?	
Hierarchy Level 2: To a surface water body (select type) <i>NOTE: Consent from LLFA or Permit from Environment Agency may be required – refer to guidance</i>		Yes ✓	No
		N/A	
		<input checked="" type="checkbox"/> Main river	<input type="checkbox"/> Canal
		<input type="checkbox"/> Ordinary watercourse	<input type="checkbox"/> Other water body
If YES - Evidence Required		If NO – Evidence Required	
		Tick <u>ALL</u> that apply	
<input checked="" type="checkbox"/>	Surface water body / watercourse survey and report	<input type="checkbox"/>	Plan showing nearby watercourses and waterbodies
		<input type="checkbox"/>	AND
		<input type="checkbox"/>	Statement providing justification in your Sustainable Drainage Strategy
			<i>Note: Where third party land is cited as a barrier, you should provide visibility of discussions held to date with the riparian landowner of the waterbody.</i>

Proposed method of surface water discharge		Is this proposed?	
Hierarchy Level 3: To a surface water sewer. N.B. Trafford will not accept surface water drainage to a highway drain		Yes	No ✓
		N/A	
		<input type="checkbox"/> Surface water sewer	
If YES - Evidence Required		If NO – Evidence Required	
		Tick <u>ALL</u> that apply	
<input type="checkbox"/>	Written correspondence from Water and Sewerage Company regarding proposed connection.	<input type="checkbox"/>	Plan showing nearby sewers
		<input type="checkbox"/>	AND
		<input type="checkbox"/>	Statement providing justification in your Sustainable Drainage Strategy

Proposed method of surface water discharge		Is this proposed?	
Hierarchy Level 4: To combined sewer		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
		N/A <input type="checkbox"/>	
If YES - Evidence Required		If NO – Evidence Required	
<input type="checkbox"/>	Written correspondence from Water and Sewerage Company	N/A	

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 7b.	071662-CUR-00-XX-RP-D-001-V07_FRA.pdf
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c) Proposed SuDS Component Types

Tick ALL that apply				
Within property boundary	<input type="checkbox"/> Rainwater harvesting	<input type="checkbox"/> Green/ blue roofs	<input checked="" type="checkbox"/> Pervious pavements [Type: A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/>	<input type="checkbox"/> Soakaway
				<input type="checkbox"/> Bio retention systems

Tick ALL that apply				
Within development site boundary (not property)	<input type="checkbox"/> Infiltration system [Type: <input type="checkbox"/> Surface level <input type="checkbox"/> Below ground]		<input type="checkbox"/> Filter strips	<input type="checkbox"/> Filter drains
	<input type="checkbox"/> Bio retention system	<input type="checkbox"/> Detention basins	<input checked="" type="checkbox"/> Ponds and wetlands	<input checked="" type="checkbox"/> Attenuation tanks/ Oversized pipes
	<input type="checkbox"/> Swales			
	If 'Other' please state:			

Off site (not within the boundary of the proposed development)	Please state:
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I confirm that the above selected components have been designed in accordance with The SuDS Manual (C753).	I confirm <input checked="" type="checkbox"/>
I confirm that the management of flows resulting from rainfall in excess of a 1 in 100 year plus climate change rainfall event, and their exceedance route(s), has been fully considered in order to minimise the risks to people, property (new and existing) and infrastructure.	I confirm <input checked="" type="checkbox"/>

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 7c.	071662-CUR-00-XX-RP-D-001-V07_FRA.pdf
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SECTION 8: OPERATION AND MAINTENANCE – TECHNICAL STANDARD S12 AND NATIONAL PLANNING POLICY FRAMEWORK

The applicant is responsible for ensuring that ALL components selected in Section 7 can be maintained for the lifetime of the development. The information required below will enable the developer to demonstrate the maintenance arrangements to the Local Planning Authority and will allow the Local Planning Authority to consider how it will be secured (e.g. via planning condition or planning obligation).

	Information Provided?
Management Plan	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Evidence Required: Plan/ drawing provided to show the position of the different SuDS components with: <ul style="list-style-type: none"> Key included to identify any of the adopting bodies that you will be offering your sustainable drainage components for adoption (<i>relates to maintenance and management arrangements below</i>). Plan/ drawing to identify any areas where certain activities are prohibited, detailing reasons why. 	<input checked="" type="checkbox"/>
Action plan for accidental pollutant spillages.	<input checked="" type="checkbox"/>

	Information Provided?
Maintenance Schedule	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Evidence Required: A copy of the maintenance schedule including: <ol style="list-style-type: none"> Proactive and preventative maintenance Detailing regular, occasional and remedial maintenance activities including recommendations for inspection and monitoring. This should include recommended frequencies, advice on plant/ machinery required and an explanation of the objectives for the maintenance proposed and potential implications of not meeting them. Reactive and corrective maintenance (e.g. product repair and replacement). Including advice on excavations, or similar works, in locations that could affect the SuDS components/ adjacent structures. 	<input checked="" type="checkbox"/>

	Information Provided?
Maintenance and Management Arrangements	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Evidence Required: Evidence of formal agreement with the party responsible for undertaking maintenance. Please select any of the adopting bodies that you will be offering your sustainable drainage components for adoption. Tick all that apply. <input checked="" type="checkbox"/> Water and Sewerage Company Section 104 agreement (Water Industry Act 1991) <input checked="" type="checkbox"/> Local Authority Public Open Space [Refer to local authority policy & check with local authority first] Please select the arrangement(s) for all non-adopted sustainable drainage components. Tick all that apply. <input checked="" type="checkbox"/> Management Company <input type="checkbox"/> Property Owner (for SuDS components within property boundary only) <input type="checkbox"/> Other (please state) <input type="text"/>	<input checked="" type="checkbox"/>

Please list any relevant document and or drawing numbers (including revision reference) to support your answers to Section 8.	071662-CUR-00-XX-RP-D-001-V07_FRA.pdf
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DECLARATION AND SUBMISSION

This pro-forma has been completed using evidence from information which has been submitted with the planning application.

The information submitted in the Sustainable Drainage Strategy and site-specific Flood Risk Assessment (FRA), where submitted, is proportionate to the site conditions, flood risks and magnitude of development and I agree that this information can be used as evidence to this sustainable drainage approach.

Agent Details			
Completed by	Charlie Smith	Email Address	
		Telephone Number(s)	
Signed off by	Dan Eddon	Accreditation(s) and/or Qualification(s) of Signatory	BEng (hons), Ph.d
Date (dd/mm/yyyy)	29.09.21	Company	Curtins

Client Details			
Name		Company	Harlex (RLP Timperley) LLP