

# PRO-FORMA 1: Sustainable Drainage System: Planning Permission

**This pro-forma is a requirement of the Planning Validation Checklist.** You **must complete all white boxes in full** and submit this pro-forma along with your supporting evidence to the Local Planning Authority for any application which seeks planning permission for major development (as defined in section 2 of [Statutory Instrument 2015 No. 595](#)).

This pro-forma supports developers and regulators in **summarising and confirming** how surface water from a development will be managed sustainably under current and future conditions. It should be completed in conjunction with the Council's 'Completing your Pro Forma' document and your sustainable drainage system should be designed in accordance with [CIRIA The SuDS Manual C753](#).

The pro-forma follows Policy CS24 of [Knowsley MBC's Local Plan](#), [National Planning Policy Framework](#), [House of Commons Written Statement \(HWSW 161\) on SuDS](#), [Planning Practice Guidance](#) and [Defra's Non-Statutory Technical Standards for Sustainable Drainage Systems](#). It is supported by the [Defra/EA Guidance on Rainfall Runoff Management](#) and can be completed using freely available tools such as [Tools for Sustainable Drainage Systems](#) or approved Industry Standard surface water management design software. The Council's [Sustainable Drainage & Surface Water Management Technical Guidance document](#) also provides further information.

## Section 1: Development Details

|                                                                            |           |                                                                                                                                                                                                                                                  |  |                                             |                                                                     |
|----------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------|---------------------------------------------------------------------|
| Development Name                                                           |           | Land to th rear of , 47 - 63 Huyton House Road, Huyton, Knowsley                                                                                                                                                                                 |  |                                             |                                                                     |
| Development Address (including postcode)                                   |           | Planning Application Reference (if available)                                                                                                                                                                                                    |  | 21/00640/FUL                                |                                                                     |
| Development Grid Reference                                                 | Northings | 342477                                                                                                                                                                                                                                           |  | Expected lifetime of development (years)    | 150                                                                 |
|                                                                            | Eastings  | 39374                                                                                                                                                                                                                                            |  | Have you submitted a Flood Risk Assessment? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Total Development Site Area (Ha)                                           |           | 0.2329                                                                                                                                                                                                                                           |  | Type of Planning Application (✓)            | Outline <input type="checkbox"/>                                    |
| Site area served by proposed drainage system (excluding open space) (Ha)*  |           | 0.2329                                                                                                                                                                                                                                           |  |                                             | Full <input checked="" type="checkbox"/>                            |
| Is your surface water drainage system designed to a (tick all that apply): |           |                                                                                                                                                                                                                                                  |  |                                             | Hybrid <input type="checkbox"/>                                     |
| Greenfield Standard                                                        |           | <ul style="list-style-type: none"> <li>Site is undeveloped and a new drainage system will be installed; OR</li> <li>Site is already developed and a new surface water drainage system will be installed to serve the new development.</li> </ul> |  |                                             | Reserved Matters <input type="checkbox"/>                           |
| Previously Developed Standard                                              |           | <ul style="list-style-type: none"> <li>Site is already developed and the <u>entirety</u> of the existing surface water drainage system will be used to serve the new development.</li> </ul>                                                     |  |                                             |                                                                     |

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## Section 2: Impermeable Area and Existing Drainage For outline or reserved matters applications, go to Section 3

|                                                                                                                | Existing (E) | Proposed (P) | Difference (P – E)                                                  | Evidence Checklist                  |                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------|--------------|--------------|---------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Impermeable Area (Ha)                                                                                          | n/a          | 0.126        | 0.126                                                               | <input checked="" type="checkbox"/> | Plans showing development layout of site with existing and proposed impermeable areas.                                                                                                                                                                                                           |
| State Drainage Method                                                                                          |              |              | N/A                                                                 | <input type="checkbox"/>            | Plans showing current and proposed locations of sustainable drainage system.                                                                                                                                                                                                                     |
| Are there existing sewers, watercourses, water bodies, highway drains, soakaways or filter drains on the site? |              |              | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Plans showing existing layout to include: <ul style="list-style-type: none"> <li>• Watercourses, open or culverted</li> <li>• Water bodies – ponds, swales etc.</li> <li>• Sewers, including manholes</li> <li>• Highway drains, include manholes</li> <li>• Soakaways, filter drains</li> </ul> |

## Section 3: Surface Water Discharge Hierarchy – Planning Practice Guidance

| Surface Water Discharge Method                                                | Proposed?                                                           | If YES - Evidence Checklist         |                                                                                                                                                                          | If NO - Evidence Checklist          |                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Infiltration to ground                                                     | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Completed Infiltration Checklist from CIRIA The SuDS Manual C753 Appendix B<br><i>An editable version of this form is available on <a href="#">SusDrain website</a>.</i> | <input checked="" type="checkbox"/> | Geotechnical Survey, including Soil Permeability Testing stating Percolation Coefficient, in accordance with BRE 365<br><b>AND</b><br>Statement providing justification in your Sustainable Drainage Strategy |
| 2. Discharge to watercourse or surface water body<br>(Main River or Ordinary) | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Watercourse and/or Water Body Survey Report                                                                                                                              | <input checked="" type="checkbox"/> | Plan showing nearby watercourses and water bodies<br><b>AND</b><br>Statement providing justification in your Sustainable Drainage Strategy                                                                    |
| 3. Discharge to surface water sewer                                           | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | <input checked="" type="checkbox"/> | Water and Sewerage Company written agreement for the Right to Connect.                                                                                                   | <input checked="" type="checkbox"/> | Plan showing nearby sewers<br><b>AND</b>                                                                                                                                                                      |
| 4. Discharge to combined sewer                                                | Yes <input type="checkbox"/> No <input type="checkbox"/>            |                                     |                                                                                                                                                                          |                                     | Statement providing justification in your Sustainable Drainage Strategy                                                                                                                                       |

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## Section 4: Calculate Peak Discharge Rates – Technical Standards S2 and S3 (unless S1 applies)

| Rainfall Event   | Existing Rate (l/s) | Greenfield Rate (l/s) | Proposed Rate (l/s)<br><i>Brownfield sites must reduce discharge rates by 50%</i> | Evidence Checklist                  |                                            |
|------------------|---------------------|-----------------------|-----------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------|
| Qbar             | 2.7                 |                       |                                                                                   | <input checked="" type="checkbox"/> | MicroDrainage (or equivalent) calculations |
| 1:1 Year Event   | 1.1                 |                       |                                                                                   |                                     |                                            |
| 1:30 Year Event  | 2.2                 |                       |                                                                                   |                                     |                                            |
| 1:100 Year Event | 2.7                 |                       | 5                                                                                 |                                     |                                            |

## Section 5: Calculate Discharge Volume – Technical Standards S4 and S6 (unless S1 applies)

| Rainfall Event          | Existing Volume (m <sup>3</sup> ) | Greenfield Volume (m <sup>3</sup> ) | Proposed Volume (m <sup>3</sup> ) | Evidence Checklist                  |                                            |
|-------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|--------------------------------------------|
| 1:100 Year 6 Hour Event |                                   |                                     | 186.7                             | <input checked="" type="checkbox"/> | MicroDrainage (or equivalent) calculations |

## Section 6: Infiltration

| Site Information                                                                                                                                                                                                                                                                                                                                                                               | ✓                                                                                                                   | Evidence Checklist                  |                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------------------|
| Do your sustainable drainage proposals include any infiltration?                                                                                                                                                                                                                                                                                                                               | Yes <input type="checkbox"/><br>No <input checked="" type="checkbox"/><br><i>If NO, please move on to Section 7</i> | <input checked="" type="checkbox"/> | Proposed sustainable drainage plans                                      |
| You should submit an alternative 'Plan B' sustainable drainage design utilising an alternative discharge method if site specific ground conditions are unknown at this stage. This will become the default design in the event infiltration proposals are not feasible upon site specific ground investigation.<br><br>Have you submitted an alternative 'Plan B' sustainable drainage design? | Yes <input type="checkbox"/><br>No <input checked="" type="checkbox"/>                                              | <input checked="" type="checkbox"/> | 'Plan B' conceptual sustainable drainage plans and statement of approach |

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## Section 7: Storage – Technical Standards S7, S8 and S9

| Storage Details                                                                                                                                                                                                                                                                                                                                                       | Details                                   | Evidence Checklist                  |                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------|
| State climate change allowance used (%)                                                                                                                                                                                                                                                                                                                               | 40                                        | <input checked="" type="checkbox"/> | State / use in MicroDrainage                                                                                |
| State storage volume provided (m <sup>3</sup> ) (excluding non-void spaces )<br><i>Must include an allowance for climate change and urban creep.</i>                                                                                                                                                                                                                  | oversized pipes and cellular storage tank | <input checked="" type="checkbox"/> | Drainage plans showing location of attenuation and all flow control devices and any supporting calculations |
| Summarise how storage will be provided for 1:30 year event on site.<br><i>Storage must be designed to ensure that at no flooding occurs onsite in a 1 in 30 year event except in designed areas and no flooding occurs offsite in a 1 in 100 year (+ climate change allowance) event.</i>                                                                             | oversized pipes                           | <input checked="" type="checkbox"/> | Plans showing size and location of storage and supporting calculations                                      |
| Summarise how storage will be provided for 1:100 year (+ climate change) 6 hour event on site.<br><i>Where storage above the 1:30 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 MicroDrainage (or equivalent) calculations.</i> | underground cellular storage tank         | <input checked="" type="checkbox"/> | Plans showing size and location of storage and supporting calculations                                      |

## Section 8: Operation and Maintenance – Technical Standard S12 and HCWS161

| Consideration                                                                                                                 | Select <u>ALL</u> that apply (✓)                                                                                                               |                          | Evidence Checklist                  |                                                              |
|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------|--------------------------------------------------------------|
| State how <u>ALL</u> components of the sustainable drainage system will be maintained for the design life of the development. | Sustainable drainage features are at property level                                                                                            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Statement provided within your Sustainable Drainage Strategy |
|                                                                                                                               | Sustainable drainage system to be adopted by Water and Sewerage Company through a Section 104 agreement (Water Industry Act 1991)              | <input type="checkbox"/> |                                     |                                                              |
|                                                                                                                               | Applicant to secure maintenance of sustainable drainage features by entering into a Section 106 agreement (Town and Country Planning Act 1990) | <input type="checkbox"/> |                                     |                                                              |

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## Declaration and Submission

*This pro-forma has been completed using evidence from information which has been submitted with my 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.*

## Submitter Details

|                           |                     |                                                       |                                   |
|---------------------------|---------------------|-------------------------------------------------------|-----------------------------------|
| Form <u>completed</u> by  | Jon Hale            | Email Address                                         | jonhale@sananconsulting           |
|                           |                     | Daytime Telephone                                     | 07399151521                       |
| Form <u>signed off</u> by | Emile Sanan         | Accreditation(s) and/or Qualification(s) of Signatory | Émile K. Sanan MEng CEng MStructE |
| Date (dd/mm/yyyy)         | 24th September 2021 | Company                                               | Sanan Consulting                  |

## Client Details

|      |              |         |              |
|------|--------------|---------|--------------|
| Name | Claire Kelly | Company | Live Housing |
|------|--------------|---------|--------------|