

SIMPLE INDEX APPROACH: TOOL



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1. The steps set out in the tool should be applied for each inflow or 'runoff area' (ie each impermeable surface area separately discharging to a SuDS component).
2. The supporting 'Design Conditions' stated by the tool must be fully considered and implemented in all cases.
3. Relevant design examples are included in the SuDS Manual Appendix C.
4. Each of the steps below are part of the process set out in the flowchart on Sheet 1.

5. Sheet 4 summarises the selections made below and indicates the acceptability of the proposed SuDS components.
DROP DOWN LIST RELEVANT INPUTS NEED TO BE SELECTED FROM THESE LISTS, FOR EACH STEP
USER ENTRY USER ENTRY CELLS ARE ONLY REQUIRED WHERE INDICATED BY THE TOOL.

STEP 1 Determine the Pollution Hazard Index for the runoff area discharging to the proposed SuDS scheme

This step requires the user to select the appropriate land use type for the area from which the runoff is occurring

If the land use varies across the 'runoff area', either:

- use the land use type with the highest Pollution Hazard Index
- apply the approach for each of the land use types to determine whether the proposed SuDS design is sufficient for all. If it is not, consider collecting more hazardous runoff separately and providing additional treatment.

If the generic land use types suggested are not applicable, select 'Other' and enter a description of the land use of the runoff area and agreed user defined indices in the row below the drop down list.

Runoff Area Land Use Description	Hazard Level	Pollution Hazard Index			DESIGN CONDITIONS	
		Total Suspended Solids	Metals	Hydrocarbons		
Select land use type from the drop down list (or 'Other' if none applicable)					1	2
Industrial chimney	Low	0.5	0.4	0.4		
Landuse Pollution Hazard Index	Low	0.5	0.4	0.4		

STEP 2A Determine the Pollution Mitigation Index for the proposed SuDS components

This step requires the user to select the proposed SuDS components that will be used to treat runoff - before it is discharged to a receiving surface waterbody or downstream infiltration component

If the runoff is discharged directly to an infiltration component, without upstream treatment, select 'None' for each of the 3 SuDS components and move to Step 2B

This step should be applied to evaluate the water quality protection provided by proposed SuDS components for discharge to receiving surface waters or downstream infiltration components (note: in England and Wales this will include components that allow any amount of infiltration, however small, even where infiltration is not specifically accounted for in the design).

If you have fewer than 3 components, select 'None' for the components that are not required

If the proposed component is bespoke and/or a proprietary treatment product and not generally described by the suggested components, then 'Proprietary treatment system' or 'User defined index' should be selected and a description of the component and agreed user defined indices should be entered in the row below the drop down list.

SuDS Component Description	Pollution Mitigation Index			DESIGN CONDITIONS		
	Total Suspended Solids	Metals	Hydrocarbons			
Select SuDS Component 1 (i.e. the upstream SuDS component from the drop down list)				1	2	3
None						
Select SuDS Component 2 (i.e. the second SuDS component in a series from the drop down list)						
None						
Select SuDS Component 3 (i.e. the third SuDS component in a series from the drop down list)						
None						
Aggregated Surface Water Pollution Mitigation Index	0	0	0			

Note: If the total aggregated mitigation index is > 1 (which is not a realistic outcome), then the outcome is fixed at 1.00. In this scenario, the proposed components are likely to have a very high mitigation potential for reducing pollutant levels in the runoff and should be sufficient for any proposed land use (note where this assessment is required, the outcome would need more detailed verification).

Is the runoff now discharged to an infiltration component?

Yes ? [Go to Step 2B](#)
 No ? [Go to Step 2C](#)

STEP 2B Determine the Pollution Mitigation Index for the proposed Groundwater Protection

This step requires the user to select the type of groundwater protection that is either part of the SuDS component or that lies between the component and the groundwater

This step should be applied where a SuDS component is specifically designed to infiltrate runoff (note: in England and Wales this will include components that allow any amount of infiltration, however small, even where infiltration is not specifically accounted for in the design).

'Groundwater protection' describes the proposed depth of soil or other material through which runoff will flow between the runoff surface and the underlying groundwater.

Where the discharge is to surface waters and risks to groundwater need not be considered, select 'None'

If the proposed groundwater protection is bespoke and/or a proprietary product and not generally described by the suggested measures, then a description of the protection and agreed user defined indices should be entered in the row below the drop down list.

Select type of groundwater protection from the drop down list	Pollution Mitigation Index			DESIGN CONDITIONS			
	Total Suspended Solids	Metals	Hydrocarbons				
Permeable pavement with a 200 mm minimum depth of sub-base with good water retention characteristics	0.7	0.6	0.7	1	2	3	4
None							
Groundwater Protection Pollution Mitigation Index	0.7	0.6	0.7				

All designs must include a minimum of 1 m of compacted aggregate or similar material between the infiltration surface and the receiving body of groundwater. The underlying soils must provide good water retention characteristics (permeability should be measured to BS5885 or BS5938) and be free from all, or designed specifically to retain, surface water. Alternative depth and soil characteristics may be used, provided that the soil is not a high water table, such that the soil will not be suspended in subsequent events.

STEP 2C Determine the Combined Pollution Mitigation Indices for the Runoff Area

This is an automatic step which combines the proposed SuDS Pollution Mitigation Indices with any Groundwater Protection Pollution Mitigation Indices

Combined Pollution Mitigation Indices for the Runoff Area	Combined Pollution Mitigation Index		
	Total Suspended Solids	Metals	Hydrocarbons
	0.7	0.6	0.7

Note: If the total aggregated mitigation index is > 1 (which is not a realistic outcome), then the outcome is fixed at 1.00. In this scenario, the proposed components are likely to have a very high mitigation potential for reducing pollutant levels in the runoff and should be sufficient for any proposed land use (note where this assessment is required, the outcome would need more detailed verification).

STEP 2D Determine Sufficiency of Pollution Mitigation Indices for Selected SuDS Components

This is an automatic step which compares the Combined Pollution Mitigation Indices with the Land Use Hazard Indices, to determine whether the proposed components are sufficient to manage each pollutant category type

When the combined mitigation index exceeds the land use pollution hazard index, then the proposed components are considered sufficient in providing pollution risk mitigation.

In England and Wales, where the discharge is to protected surface waters or groundwater, an additional treatment component (in series and above that required for standard discharge), or other equivalent protection, is required for the protection of surface waters or groundwater. Protected surface waters are those designated for drinking water abstraction. In England and Wales, protected groundwater resources are defined as Source Protection Zone 1. In Northern Ireland, a more precautionary approach may be required and this should be checked with the environmental regulator or a site by site basis.

Sufficiency of Pollution Mitigation Index	Sufficiency of Pollution Mitigation Index			DESIGN CONDITIONS
	Total Suspended Solids	Metals	Hydrocarbons	
Sufficient	Sufficient	Sufficient	Sufficient	1

Reference to local planning documents should also be made to identify any additional protection required for discharge to protected water bodies (see Chapter 7 for SuDS design process). The implications of developments on or within close proximity to an area with an environmental designation, such as a Site of Special Scientific Interest (SSSI), should be considered in consultation with relevant consentation bodies such as Natural England.

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1. The steps set out in the tool should be applied for each inflow or 'runoff area' (ie each impermeable surface area separately discharging to a SuDS component).
2. The supporting 'Design Conditions' stated by the tool must be fully considered and implemented in all cases.
3. Relevant design examples are included in the SuDS Manual Appendix C.
4. Each of the steps below are part of the process set out in the flowchart on Sheet 1.

5. Sheet 4 summarises the selections made below and indicates the acceptability of the proposed SuDS components.

- DROP DOWN LIST RELEVANT INPUTS NEED TO BE SELECTED FROM THESE LISTS, FOR EACH STEP
- USER ENTRY USER ENTRY CELLS ARE ONLY REQUIRED WHERE INDICATED BY THE TOOL.

STEP 1 Determine the Pollution Hazard Index for the runoff area discharging to the proposed SuDS scheme

This step requires the user to select the appropriate land use type for the area from which the runoff is occurring

If the land use varies across the 'runoff area', either:

- use the land use type with the highest Pollution Hazard Index
- apply the approach for each of the land use types to determine whether the proposed SuDS design is sufficient for all. If it is not, consider collecting more hazardous runoff separately and providing additional treatment.

If the generic land use types suggested are not applicable, select 'Other' and enter a description of the land use of the runoff area and agreed user defined indices in the row below the drop down list.

Select land use type from the drop down list (or 'Other' if none applicable)

If the generic land use types in the drop down list above are not applicable, select 'Other' and enter a description of the land use of the runoff area and agreed user defined indices in this row:

Runoff Area Land Use Description	Hazard Level	Pollution Hazard Index		
		Total Suspended Solids	Metals	Hydrocarbons
Roads (excluding low traffic roads, highly frequented busy approaches to industrial estates, trunk roads/motorways)	Medium	0.7	0.6	0.7
Landuse Pollution Hazard Index	Medium	0.7	0.6	0.7

DESIGN CONDITIONS		
1	2	

STEP 2A Determine the Pollution Mitigation Index for the proposed SuDS components

This step requires the user to select the proposed SuDS components that will be used to treat runoff - before it is discharged to a receiving surface waterbody or downstream infiltration component

If the runoff is discharged directly to an infiltration component, without upstream treatment, select 'None' for each of the 3 SuDS components and move to Step 2B

This step should be applied to evaluate the water quality protection provided by proposed SuDS components for discharges to receiving surface waters or downstream infiltration components (note: in England and Wales this will include components that allow any amount of infiltration, however small, even where infiltration is not specifically accounted for in the design).

If you have fewer than 3 components, select 'None' for the components that are not required

If the proposed component is bespoke and/or a proprietary treatment product and not generally described by the suggested components, then 'Proprietary treatment system' or 'User defined index' should be selected and a description of the component and agreed user defined indices should be entered in the row below the drop down list.

Select SuDS Component 1 (i.e. the upstream SuDS component from the drop down list)

Select SuDS Component 2 (i.e. the second SuDS component in a series from the drop down list)

Select SuDS Component 3 (i.e. the third SuDS component in a series from the drop down list)

If the proposed SuDS components are bespoke/proprietary and/or the generic indices above are not considered appropriate, select 'Proprietary treatment system' or 'User defined index' and enter component descriptions and agreed user defined indices in these rows:

SuDS Component Description	Pollution Mitigation Index		
	Total Suspended Solids	Metals	Hydrocarbons
None			
None			
None			
Aggregated Surface Water Pollution Mitigation Index	0	0	0

DESIGN CONDITIONS		
1	2	3

Note: If the total aggregated mitigation index is > 1 (which is not a realistic outcome), then the outcome is fixed at 1.00. In this scenario, the proposed components are likely to have a very high mitigation potential for reducing pollutant levels in the runoff and should be sufficient for any proposed land use (note where risk assessment is required, the outcome would need more detailed verification).

Is the runoff now discharged to an infiltration component?

- Yes? [Go to Step 2B](#)
- No? [Go to Step 2C](#)

STEP 2B Determine the Pollution Mitigation Index for the proposed Groundwater Protection

This step requires the user to select the type of groundwater protection that is either part of the SuDS component or that lies between the component and the groundwater

This step should be applied where a SuDS component is specifically designed to infiltrate runoff (note: in England and Wales this will include components that allow any amount of infiltration, however small, even where infiltration is not specifically accounted for in the design).

'Groundwater protection' describes the proposed depth of soil or other material through which runoff will flow between the runoff surface and the underlying groundwater.

Where the discharge is to surface waters and risks to groundwater need not be considered, select 'None'

If the proposed groundwater protection is bespoke and/or a proprietary product and not generally described by the suggested measures, then a description of the protection and agreed user defined indices should be entered in the row below the drop down list.

Select type of groundwater protection from the drop down list

If the proposed groundwater protection is bespoke/proprietary and/or the generic indices above are not considered appropriate, select 'Proprietary product' or 'User defined index' and enter a description of the protection and agreed user defined indices in this row:

Groundwater Protection Description	Pollution Mitigation Index		
	Total Suspended Solids	Metals	Hydrocarbons
Permeable pavement installed by 200 mm minimum depth of sub-base with good water retention characteristics	0.7	0.6	0.7
Groundwater Protection Pollution Mitigation Index	0.7	0.6	0.7

DESIGN CONDITIONS			
1	2	3	4
All designs must include a minimum of 1 m constructed depth of sub-base or similar material between the infiltration surface and the receiving body groundwater level. Infiltration components should always be protected by upstream components that trap all, or designed specifically to retain sediment in a separate bed, and, unless necessary for maintenance, such that the sediment will not be re-suspended in subsequent events.	The permeable pavement must include a suitable filtration layer providing treatment and must include a granular filter at the base separating the sub-base from the sub-grade. The underlying sub-base must provide good water retention characteristics (noted as recommended in SuDS (2015) and SuDS (2015) or other appropriate guidance). Alternative depth and sub-structure must provide equivalent protection to the underlying groundwater.		

STEP 2C Determine the Combined Pollution Mitigation Indices for the Runoff Area

This is an automatic step which combines the proposed SuDS Pollution Mitigation Indices with any Groundwater Protection Pollution Mitigation Indices

Combined Pollution Mitigation Indices for the Runoff Area	Combined Pollution Mitigation Indices		
	Total Suspended Solids	Metals	Hydrocarbons
	0.7	0.6	0.7

Note: If the total aggregated mitigation index is > 1 (which is not a realistic outcome), then the outcome is fixed at 1.00. In this scenario, the proposed components are likely to have a very high mitigation potential for reducing pollutant levels in the runoff and should be sufficient for any proposed land use (note where risk assessment is required, the outcome would need more detailed verification).

STEP 2D Determine Sufficiency of Pollution Mitigation Indices for Selected SuDS Components

This is an automatic step which compares the Combined Pollution Mitigation Indices with the Land Use Hazard Indices, to determine whether the proposed components are sufficient to manage each pollutant category type

When the combined mitigation index exceeds the land use pollution hazard index, then the proposed components are considered sufficient in providing pollution risk mitigation.

In England and Wales, where the discharge is to protected surface waters or groundwater, an additional treatment component (in over and above that required for standard discharge), or other equivalent protection, is required for the protection of surface waters or groundwater. Protected surface waters are those designated for drinking water abstraction. In England and Wales, protected groundwater resources are defined as Source Protection Zone 1. In Northern Ireland, a more precautionary approach may be required and this should be checked with the environmental regulator or a site by site basis.

Sufficiency of Pollution Mitigation Index

Sufficiency of Pollution Mitigation Index	Sufficiency of Pollution Mitigation Index		
	Total Suspended Solids	Metals	Hydrocarbons
Sufficient	Sufficient	Sufficient	Sufficient

DESIGN CONDITIONS	
1	
Reference to local planning documents should also be made to identify any additional protection required for sites due to habitat conservation (see Chapter 7 for SuDS design process). The implications of developments on or within close proximity to an area with an environmental designation, such as a Site of Special Scientific Interest (SSSI), should be considered in consultation with relevant conservation bodies such as Natural England.	

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1. The steps set out in the tool should be applied for each inflow or 'runoff area' (ie each impermeable surface area separately discharging to a SuDS component).
2. The supporting 'Design Conditions' stated by the tool must be fully considered and implemented in all cases.
3. Relevant design examples are included in the SuDS Manual Appendix C.
4. Each of the steps below are part of the process set out in the flowchart on Sheet 1.

5. Sheet 4 summarises the selections made below and indicates the acceptability of the proposed SuDS components.

- DROP DOWN LIST RELEVANT INPUTS NEED TO BE SELECTED FROM THESE LISTS, FOR EACH STEP
- USER ENTRY USER ENTRY CELLS ARE ONLY REQUIRED WHERE INDICATED BY THE TOOL.

STEP 1 Determine the Pollution Hazard Index for the runoff area discharging to the proposed SuDS scheme

This step requires the user to select the appropriate land use type for the area from which the runoff is occurring

If the land use varies across the 'runoff area', either:

- use the land use type with the highest Pollution Hazard Index
- apply the approach for each of the land use types to determine whether the proposed SuDS design is sufficient for all. If it is not, consider collecting more hazardous runoff separately and providing additional treatment.

If the generic land use types suggested are not applicable, select 'Other' and enter a description of the land use of the runoff area and agreed user defined indices in the row below the drop down list.

Runoff Area Land Use Description	Hazard Level	Pollution Hazard Index			DESIGN CONDITIONS	
		Total Suspended Solids	Metals	Hydrocarbons		
Select land use type from the drop down list (or 'Other' if none applicable)					1	2
Residential parking	Low	0.5	0.4	0.4		
Landuse Pollution Hazard Index		Low	0.5	0.4	0.4	

STEP 2A Determine the Pollution Mitigation Index for the proposed SuDS components

This step requires the user to select the proposed SuDS components that will be used to treat runoff - before it is discharged to a receiving surface waterbody or downstream infiltration component

If the runoff is discharged directly to an infiltration component, without upstream treatment, select 'None' for each of the 3 SuDS components and move to Step 2B

This step should be applied to evaluate the water quality protection provided by proposed SuDS components for discharge to receiving surface waters or downstream infiltration components (note: in England and Wales this will include components that allow any amount of infiltration, however small, even where infiltration is not specifically accounted for in the design).

If you have fewer than 3 components, select 'None' for the components that are not required

If the proposed component is bespoke and/or a proprietary treatment product and not generally described by the suggested components, then 'Proprietary treatment system' or 'User defined index' should be selected and a description of the component and agreed user defined indices should be entered in the row below the drop down list.

SuDS Component Description	Pollution Mitigation Index			DESIGN CONDITIONS			
	Total Suspended Solids	Metals	Hydrocarbons				
Select SuDS Component 1 (i.e. the upstream SuDS component from the drop down list)				1	2	3	
None							
Select SuDS Component 2 (i.e. the second SuDS component in a series from the drop down list)							
None							
Select SuDS Component 3 (i.e. the third SuDS component in a series from the drop down list)							
None							
Aggregated Surface Water Pollution Mitigation Index		0	0	0			

Note: If the total aggregated mitigation index is > 1 (which is not a realistic outcome), then the outcome is fixed at 1.00. In this scenario, the proposed components are likely to have a very high mitigation potential for reducing pollutant levels in the runoff and should be sufficient for any proposed land use (note where the assessment is required, the outcome would need more detailed verification).

Is the runoff now discharged to an infiltration component?

- Yes? [Go to Step 2B](#)
- No? [Go to Step 2C](#)

STEP 2B Determine the Pollution Mitigation Index for the proposed Groundwater Protection

This step requires the user to select the type of groundwater protection that is either part of the SuDS component or that lies between the component and the groundwater

This step should be applied where a SuDS component is specifically designed to infiltrate runoff (note: in England and Wales this will include components that allow any amount of infiltration, however small, even where infiltration is not specifically accounted for in the design).

'Groundwater protection' describes the proposed depth of soil or other material through which runoff will flow between the runoff surface and the underlying groundwater.

Where the discharge is to surface waters and this to groundwater need not be considered, select 'None'

If the proposed groundwater protection is bespoke and/or a proprietary product and not generally described by the suggested measures, then a description of the protection and agreed user defined indices should be entered in the row below the drop down list.

Select type of groundwater protection from the drop down list	Pollution Mitigation Index			DESIGN CONDITIONS			
	Total Suspended Solids	Metals	Hydrocarbons				
Permeable pavement with a minimum depth of soil with good water retention characteristics	0.7	0.6	0.7	1	2	3	4
None							
Groundwater Protection Pollution Mitigation Index		0.7	0.6	0.7			

All designs must include a minimum of 1 m (or equivalent depth of soil) or greater material between the infiltration surface and the receiving body of groundwater. The underlying soils must provide good water retention characteristics (see BS 5930:2015 for details). Infiltration components should always be protected by a minimum of 1 m (or equivalent depth of soil) or greater material, such that the soil will not be suspended in subsequent events.

STEP 2C Determine the Combined Pollution Mitigation Indices for the Runoff Area

This is an automatic step which combines the proposed SuDS Pollution Mitigation Indices with any Groundwater Protection Pollution Mitigation Indices

Combined Pollution Mitigation Indices for the Runoff Area	Combined Pollution Mitigation Index		
	Total Suspended Solids	Metals	Hydrocarbons
	0.7	0.6	0.7

Note: If the total aggregated mitigation index is > 1 (which is not a realistic outcome), then the outcome is fixed at 1.00. In this scenario, the proposed components are likely to have a very high mitigation potential for reducing pollutant levels in the runoff and should be sufficient for any proposed land use (note where the assessment is required, the outcome would need more detailed verification).

STEP 2D Determine Sufficiency of Pollution Mitigation Indices for Selected SuDS Components

This is an automatic step which compares the Combined Pollution Mitigation Indices with the Land Use Hazard Indices, to determine whether the proposed components are sufficient to manage each pollutant category type

When the combined mitigation index exceeds the land use pollution hazard index, then the proposed components are considered sufficient in providing pollution risk mitigation.

In England and Wales, where the discharge is to protected surface waters or groundwater, an additional treatment component (in series and above that required for standard discharge), or other equivalent protection, is required for the protection of surface waters in the event of an unpermitted pollutant event or poor system performance. Protected surface waters are those designated for drinking water abstraction. In England and Wales, protected groundwater resources are defined as Source Protection Zone 1. In Northern Ireland, a more prescriptive approach may be required and this should be checked with the environmental regulator or a site by site basis.

Sufficiency of Pollution Mitigation Index	Sufficiency of Pollution Mitigation Index		
	Total Suspended Solids	Metals	Hydrocarbons
Sufficient	Sufficient	Sufficient	1

Reference to local planning documents should also be made to identify any additional protection required for discharge to protected water bodies (see Chapter 7 for SuDS design process). The implications of developments on or within close proximity to an area with an environmental designation, such as a Site of Special Scientific Interest (SSSI), should be considered in consultation with relevant consentation bodies such as Natural England.

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1. The steps set out in the tool should be applied for each inflow or 'runoff area' (ie each impermeable surface area separately discharging to a SuDS component).
2. The supporting 'Design Conditions' stated by the tool must be fully considered and implemented in all cases.
3. Relevant design examples are included in the SuDS Manual Appendix C.
4. Each of the steps below are part of the process set out in the flowchart on Sheet 1.

5. Sheet 4 summarises the selections made below and indicates the acceptability of the proposed SuDS components.

DROP DOWN LIST RELEVANT INPUTS NEED TO BE SELECTED FROM THESE LISTS, FOR EACH STEP

USER ENTRY USER ENTRY CELLS ARE ONLY REQUIRED WHERE INDICATED BY THE TOOL.

STEP 1 Determine the Pollution Hazard Index for the runoff area discharging to the proposed SuDS scheme

This step requires the user to select the appropriate land use type for the area from which the runoff is occurring

If the land use varies across the 'runoff area', either:

- use the land use type with the highest Pollution Hazard Index
- apply the approach for each of the land use types to determine whether the proposed SuDS design is sufficient for all. If it is not, consider collecting more hazardous runoff separately and providing additional treatment.

If the generic land use types suggested are not applicable, select 'Other' and enter a description of the land use of the runoff area and agreed user defined indices in the row below the drop down list.

Select land use type from the drop down list (or 'Other' if none applicable)

If the generic land use types in the drop down list above are not applicable, select 'Other' and enter a description of the land use of the runoff area and agreed user defined indices in this row.

Runoff Area Land Use Description	Hazard Level	Pollution Hazard Index			DESIGN CONDITIONS
		Total Suspended Solids	Metals	Hydrocarbons	
Residential roofing	Very low	0.2	0.2	0.05	1 2
Landuse Pollution Hazard Index	Very low	0.2	0.2	0.05	

STEP 2A Determine the Pollution Mitigation Index for the proposed SuDS components

This step requires the user to select the proposed SuDS components that will be used to treat runoff - before it is discharged to a receiving surface waterbody or downstream infiltration component

If the runoff is discharged directly to an infiltration component, without upstream treatment, select 'None' for each of the 3 SuDS components and move to Step 2B

The user should be equipped to evaluate the water quality protection provided by proposed SuDS components for discharge to receiving surface waters or downstream infiltration components (note: in England and Wales this will include components that allow any amount of infiltration, however small, even where infiltration is not specifically accounted for in the design).

If you have fewer than 3 components, select 'None' for the components that are not required

If the proposed component is bespoke and/or a proprietary treatment product and not generally described by the suggested components, then 'Proprietary treatment system' or 'User defined index' should be selected and a description of the component and agreed user defined indices should be entered in the row below the drop down list.

Select SuDS Component 1 (i.e. the upstream SuDS component from the drop down list)

Select SuDS Component 2 (i.e. the second SuDS component in a series from the drop down list)

Select SuDS Component 3 (i.e. the third SuDS component in a series from the drop down list)

If the proposed SuDS components are bespoke/proprietary and/or the generic indices above are not considered appropriate, select 'Proprietary treatment system' or 'User defined index' and enter component descriptions and agreed user defined indices in these rows:

SuDS Component Description	Pollution Mitigation Index			DESIGN CONDITIONS
	Total Suspended Solids	Metals	Hydrocarbons	
None				1 2 3
None				
None				
Aggregated Surface Water Pollution Mitigation Index	0	0	0	

Note: If the total aggregated mitigation index is > 1 (which is not a realistic outcome), then the outcome is fixed at 0.50. In this scenario, the proposed components are likely to have a very high mitigation potential for reducing pollutant levels in the runoff and should be sufficient for any proposed land use (note where this assessment is required, the outcome would need more detailed verification).

Is the runoff now discharged to an infiltration component?

Yes? [Go to Step 2B](#)
No? [Go to Step 2C](#)

STEP 2B Determine the Pollution Mitigation Index for the proposed Groundwater Protection

This step requires the user to select the type of groundwater protection that is either part of the SuDS component or that lies between the component and the groundwater

This step should be applied where a SuDS component is specifically designed to infiltrate runoff (note: in England and Wales this will include components that allow any amount of infiltration, however small, even where infiltration is not specifically accounted for in the design).

'Groundwater protection' describes the proposed depth of soil or other material through which runoff will flow between the runoff surface and the underlying groundwater.

Where the discharge is to surface waters and this to groundwater need not be considered, select 'None'

If the proposed groundwater protection is bespoke and/or a proprietary product and not generally described by the suggested measures, then a description of the protection and agreed user defined indices should be entered in the row below the drop down list.

Select type of groundwater protection from the drop down list

If the proposed groundwater protection is bespoke/proprietary and/or the generic indices above are not considered appropriate, select 'Proprietary product' or 'User defined index' and enter a description of the protection and agreed user defined indices in this row.

Groundwater Protection Description	Pollution Mitigation Index				DESIGN CONDITIONS
	Total Suspended Solids	Metals	Hydrocarbons		
300 mm minimum depth of soils with good cation exchange capacity	0.4	0.3	0.3		1 2 3 4
Groundwater Protection Pollution Mitigation Index	0.4	0.3	0.3		

All designs must include a minimum of 1 m (unconsolidated) depth of soil or other material between the infiltration surface and the receiving body groundwater level. Infiltration components should always be provided by upstream components that trap all, or designed specifically to retain sediment in a separate bed tray, easily accessible for maintenance, such that the sediment will not be re-suspended to subsequent events. The underlying soils must provide good cation exchange capacity (eg as recommended in SuDS (SI) and SuDS (SI) Part 2) or other appropriate guidance. Alternative depth and soil characteristics may be considered, such that the sediment will not be re-suspended to subsequent events.

STEP 2C Determine the Combined Pollution Mitigation Indices for the Runoff Area

This is an automatic step which combines the proposed SuDS Pollution Mitigation Indices with any Groundwater Protection Pollution Mitigation Indices

Combined Pollution Mitigation Indices for the Runoff Area	Combined Pollution Mitigation Indices		
	Total Suspended Solids	Metals	Hydrocarbons
	0.4	0.3	0.3

Note: If the total aggregated mitigation index is > 1 (which is not a realistic outcome), then the outcome is fixed at 0.50. In this scenario, the proposed components are likely to have a very high mitigation potential for reducing pollutant levels in the runoff and should be sufficient for any proposed land use (note where this assessment is required, the outcome would need more detailed verification).

STEP 2D Determine Sufficiency of Pollution Mitigation Indices for Selected SuDS Components

This is an automatic step which compares the Combined Pollution Mitigation Indices with the Land Use Hazard Indices, to determine whether the proposed components are sufficient to manage each pollutant category type

When the combined mitigation index exceeds the land use pollution hazard index, then the proposed components are considered sufficient in providing pollution risk mitigation.

In England and Wales, where the discharge is to protected surface waters or groundwater, an additional treatment component (ie over and above that required for standard discharge), or other equivalent protection, is required for the protection of surface waters or groundwater. Protected surface waters are those designated for drinking water abstraction. In England and Wales, protected groundwater resources are defined as Source Protection Zone 1. In Northern Ireland, a more precautionary approach may be required and this should be checked with the environmental regulator or a site by site basis.

Sufficiency of Pollution Mitigation Index

Sufficiency of Pollution Mitigation Index	Sufficiency of Pollution Mitigation Index		
	Total Suspended Solids	Metals	Hydrocarbons
	Sufficient	Sufficient	Sufficient

Reference to local planning documents should also be made to identify any additional protection required for sites due to habitat conservation (see Chapter 7 for SuDS design process). The implications of developments on or within close proximity to an area with an environmental designation, such as a Site of Special Scientific Interest (SSSI), should be considered in consultation with relevant conservation bodies such as Natural England.

SIMPLE INDEX APPROACH: TOOL



HMW shall not be liable for any direct or indirect damage, claims, loss, cost, expense or liability whatsoever arising out of the use or impossibility to use the tool, even when such has been informed of the possibility of the same. The user hereby indemnifies HMW from and against any damage, claims, loss, expense or liability resulting from any action taken against HMW that is related in any way to the use of the tool or any reliance made in respect of the output of such use by any person whatsoever. HMW does not guarantee that the tool's functions meet the requirements of any person, nor that the tool is free from errors.

- The steps set out in the tool should be applied for each inflow or 'runoff area' (ie each impermeable surface area separately discharging to a SuDS component).
- The supporting 'Design Conditions' stated by the tool must be fully considered and implemented in all cases.
- Relevant design examples are included in the SuDS Manual Appendix C.
- Each of the steps below are part of the process set out in the flowchart on Sheet 1.
- Sheet 4 summarises the selections made below and indicates the acceptability of the proposed SuDS components.

DROP DOWN LIST RELEVANT INPUTS NEED TO BE SELECTED FROM THESE LISTS, FOR EACH STEP
USER ENTRY USER ENTRY CELLS ARE ONLY REQUIRED WHERE INDICATED BY THE TOOL.

STEP 1 Determine the Pollution Hazard Index for the runoff area discharging to the proposed SuDS scheme

This step requires the user to select the appropriate land use type for the area from which the runoff is occurring

If the land use varies across the 'runoff area', either:

- use the land use type with the highest Pollution Hazard Index
- apply the approach for each of the land use types to determine whether the proposed SuDS design is sufficient for all. If it is not, consider collecting more hazardous runoff separately and providing additional treatment.

If the generic land use types suggested are not applicable, select 'Other' and enter a description of the land use of the runoff area and agreed user defined indices in the row below the drop down list.

Select land use type from the drop down list (or 'Other' if none applicable)

If the generic land use types in the drop down list above are not applicable, select 'Other' and enter a description of the land use of the runoff area and agreed user defined indices in this row.

Runoff Area Land Use Description	Hazard Level	Pollution Hazard Index			DESIGN CONDITIONS	
		Total Suspended Solids	Metals	Hydrocarbons	1	2
Low traffic roads (e.g. residential roads and general access roads, < 300 traffic movements/day)	Low	0.5	0.4	0.4		
Landuse Pollution Hazard Index	Low	0.5	0.4	0.4		

STEP 2A Determine the Pollution Mitigation Index for the proposed SuDS components

This step requires the user to select the proposed SuDS components that will be used to treat runoff - before it is discharged to a receiving surface waterbody or downstream infiltration component

If the runoff is discharged directly to an infiltration component, without upstream treatment, select 'None' for each of the 3 SuDS components and move to Step 2B

This step should be applied to evaluate the water quality protection provided by proposed SuDS components for discharges to receiving surface waters or downstream infiltration components (note: in England and Wales this will include components that allow any amount of infiltration, however small, even where infiltration is not specifically accounted for in the design).

If you have fewer than 3 components, select 'None' for the components that are not required

If the proposed component is bespoke and/or a proprietary treatment product and not generally described by the suggested components, then 'Proprietary treatment system' or 'User defined index' should be selected and a description of the component and agreed user defined indices should be entered in the row below the drop down list.

Select SuDS Component 1 (i.e. the upstream SuDS component from the drop down list)

Select SuDS Component 2 (i.e. the second SuDS component in a series from the drop down list)

Select SuDS Component 3 (i.e. the third SuDS component in a series from the drop down list)

If the proposed SuDS components are bespoke/proprietary and/or the generic indices above are not considered appropriate, select 'Proprietary treatment system' or 'User defined index' and enter component descriptions and agreed user defined indices in these rows:

SuDS Component Description	Pollution Mitigation Index			DESIGN CONDITIONS		
	Total Suspended Solids	Metals	Hydrocarbons	1	2	3
None						
None						
None						
Aggregated Surface Water Pollution Mitigation Index	0	0	0			

Note: If the total aggregated mitigation index is > 1 (which is not a realistic outcome), then the outcome is fixed at $= 1.00$. In this scenario, the proposed components are likely to have a very high mitigation potential for reducing pollutant levels in the runoff and should be sufficient for any proposed land use (note where this assessment is required, the outcome would need more detailed verification).

Is the runoff now discharged to an infiltration component?

Yes? [Go to Step 2B](#)
 No? [Go to Step 2C](#)

STEP 2B Determine the Pollution Mitigation Index for the proposed Groundwater Protection

This step requires the user to select the type of groundwater protection that is either part of the SuDS component or that lies between the component and the groundwater

This step should be applied where a SuDS component is specifically designed to infiltrate runoff (note: in England and Wales this will include components that allow any amount of infiltration, however small, even where infiltration is not specifically accounted for in the design).

'Groundwater protection' describes the proposed depth of soil or other material through which runoff will flow between the runoff surface and the underlying groundwater.

Where the discharge is to surface waters and this to groundwater need not be considered, select 'None'

If the proposed groundwater protection is bespoke and/or a proprietary product and not generally described by the suggested measures, then a description of the protection and agreed user defined indices should be entered in the row below the drop down list.

Select type of groundwater protection from the drop down list

If the proposed groundwater protection is bespoke/proprietary and/or the generic indices above are not considered appropriate, select 'Proprietary product' or 'User defined index' and enter a description of the protection and agreed user defined indices in this row.

Total Suspended Solids	Pollution Mitigation Index			DESIGN CONDITIONS			
	Metals	Hydrocarbons		1	2	3	4
Permeable pavement with a minimum depth of 200 mm minimum depth of soil with good water retention characteristics	0.7	0.6	0.7				
Groundwater Protection Pollution Mitigation Index	0.7	0.6	0.7				

All designs must include a minimum of 1 m constructed depth of soil or other material between the infiltration surface and the receiving body of groundwater. The underlying soils must provide good water retention characteristics (as defined in BS 5980) or other appropriate geotechnical measures, such that the soil/water will not be suspended in subsequent events. The permeable pavement must include a suitable drainage layer providing treatment and must include a granular filter at the base separating the infiltration surface and the receiving body of groundwater. The underlying soils must provide good water retention characteristics (as defined in BS 5980) or other appropriate geotechnical measures, such that the soil/water will not be suspended in subsequent events.

STEP 2C Determine the Combined Pollution Mitigation Indices for the Runoff Area

This is an automatic step which combines the proposed SuDS Pollution Mitigation Indices with any Groundwater Protection Pollution Mitigation Indices

Total Suspended Solids	Combined Pollution Mitigation Index		
	Metals	Hydrocarbons	
Combined Pollution Mitigation Indices for the Runoff Area	0.7	0.6	0.7

Note: If the total aggregated mitigation index is > 1 (which is not a realistic outcome), then the outcome is fixed at $= 1.00$. In this scenario, the proposed components are likely to have a very high mitigation potential for reducing pollutant levels in the runoff and should be sufficient for any proposed land use (note where this assessment is required, the outcome would need more detailed verification).

STEP 2D Determine Sufficiency of Pollution Mitigation Indices for Selected SuDS Components

This is an automatic step which compares the Combined Pollution Mitigation Indices with the Land Use Hazard Indices, to determine whether the proposed components are sufficient to manage each pollutant category type

When the combined mitigation index exceeds the land use pollution hazard index, then the proposed components are considered sufficient in providing pollution risk mitigation.

In England and Wales, where the discharge is to protected surface waters or groundwater, an additional treatment component (in series and above that required for standard discharge), or other equivalent protection, is required for the protection of surface waters or groundwater. Protected surface waters are those designated for drinking water abstraction. In England and Wales, protected groundwater resources are defined as Source Protection Zone 1. In Northern Ireland, a more precautionary approach may be required and this should be checked with the environmental regulator or a site by site basis.

Sufficiency of Pollution Mitigation Index	Total Suspended Solids		
	Metals	Hydrocarbons	
Sufficient	Sufficient	Sufficient	

Reference to local planning documents should also be made to identify any additional protection required for sites due to habitat conservation (see Chapter 7 for SuDS design process). The implications of developments on or within close proximity to an area with an environmental designation, such as a Site of Special Scientific Interest (SSSI), should be considered in consultation with relevant conservation bodies such as Natural England.

SIMPLE INDEX APPROACH: TOOL



HMW shall not be liable for any direct or indirect damage, claims, loss, cost, expense or liability howsoever arising out of the use or impossibility to use the tool, even when such has been informed of the possibility of the same. The user hereby indemnifies HMW from and against any damage, claims, loss, expense or liability resulting from any action taken against HMW that is related in any way to the use of the tool or any reliance made in respect of the output of such use by any person whatsoever. HMW does not guarantee that the tool's functions meet the requirements of any person, nor that the tool is free from errors.

1. The steps set out in the tool should be applied for each inflow or 'runoff area' (ie each impermeable surface area separately discharging to a SuDS component).
2. The supporting 'Design Conditions' stated by the tool must be fully considered and implemented in all cases.
3. Relevant design examples are included in the SuDS Manual Appendix C.
4. Each of the steps below are part of the process set out in the flowchart on Sheet 1.
5. Sheet 4 summarises the selections made below and indicates the acceptability of the proposed SuDS components.

DROP DOWN LIST RELEVANT INPUTS NEED TO BE SELECTED FROM THESE LISTS, FOR EACH STEP
USER ENTRY USER ENTRY CELLS ARE ONLY REQUIRED WHERE INDICATED BY THE TOOL.

STEP 1 Determine the Pollution Hazard Index for the runoff area discharging to the proposed SuDS scheme

This step requires the user to select the appropriate land use type for the area from which the runoff is occurring

If the land use varies across the 'runoff area', either:

- use the land use type with the highest Pollution Hazard Index
- apply the approach for each of the land use types to determine whether the proposed SuDS design is sufficient for all. If it is not, consider collecting more hazardous runoff separately and providing additional treatment.

If the generic land use types suggested are not applicable, select 'Other' and enter a description of the land use of the runoff area and agreed user defined indices in the row below the drop down list.

Runoff Area Land Use Description	Hazard Level	Pollution Hazard Index			DESIGN CONDITIONS	
		Total Suspended Solids	Metals	Hydrocarbons	1	2
Non-residential parking with infrequent charge (e.g. school, office, < 200 traffic movements a day)	Low	0.5	0.4	0.4		
Landuse Pollution Hazard Index	Low	0.5	0.4	0.4		

STEP 2A Determine the Pollution Mitigation Index for the proposed SuDS components

This step requires the user to select the proposed SuDS components that will be used to treat runoff - before it is discharged to a receiving surface waterbody or downstream infiltration component

If the runoff is discharged directly to an infiltration component, without upstream treatment, select 'None' for each of the 3 SuDS components and move to Step 2B

The user should be equipped to evaluate the water quality protection provided by proposed SuDS components for discharge to receiving surface waters or downstream infiltration components (note: in England and Wales this will include components that allow any amount of infiltration, however small, even where infiltration is not specifically accounted for in the design).

If you have fewer than 3 components, select 'None' for the components that are not required

If the proposed component is bespoke and/or a proprietary treatment product and not generally described by the suggested components, then 'Proprietary treatment system' or 'User defined index' should be selected and a description of the component and agreed user defined indices should be entered in the row below the drop down list.

SuDS Component Description	Pollution Mitigation Index			DESIGN CONDITIONS		
	Total Suspended Solids	Metals	Hydrocarbons	1	2	3
Select SuDS Component 1 (i.e. the upstream SuDS component from the drop down list)	None					
Select SuDS Component 2 (i.e. the second SuDS component in a series from the drop down list)	None					
Select SuDS Component 3 (i.e. the third SuDS component in a series from the drop down list)	None					
Aggregated Surface Water Pollution Mitigation Index	0	0	0			

Note: If the total aggregated mitigation index is > 1 (which is not a realistic outcome), then the outcome is fixed at $= 1.00$. In this scenario, the proposed components are likely to have a very high mitigation potential for reducing pollutant levels in the runoff and should be sufficient for any proposed land use (note where this assessment is required, the outcome would need more detailed verification).

Is the runoff now discharged to an infiltration component?

Yes? [Go to Step 2B](#)
 No? [Go to Step 2C](#)

STEP 2B Determine the Pollution Mitigation Index for the proposed Groundwater Protection

This step requires the user to select the type of groundwater protection that is either part of the SuDS component or that lies between the component and the groundwater

This step should be applied where a SuDS component is specifically designed to infiltrate runoff (note: in England and Wales this will include components that allow any amount of infiltration, however small, even where infiltration is not specifically accounted for in the design).

'Groundwater protection' describes the proposed depth of soil or other material through which runoff will flow between the runoff surface and the underlying groundwater.

Where the discharge is to surface waters and risks to groundwater need not be considered, select 'None'

If the proposed groundwater protection is bespoke and/or a proprietary product and not generally described by the suggested measures, then a description of the protection and agreed user defined indices should be entered in the row below the drop down list.

Select type of groundwater protection from the drop down list	Pollution Mitigation Index			DESIGN CONDITIONS			
	Total Suspended Solids	Metals	Hydrocarbons	1	2	3	4
Permeable pavement with a minimum depth of 200 mm with good construction atmosphere potential	0.7	0.6	0.7				
Groundwater Protection Pollution Mitigation Index	0.7	0.6	0.7				

All designs must include a minimum of 1 m constructed depth of soil or other material between the infiltration surface and the receiving body groundwater level. The underlying soils must provide good contaminant attenuation potential (eg as recommended in BS5830 (so) and BS 13600 (soil) or other appropriate guidance). Alternative depth and soil construction may be considered, such that the soil/soil will not be suspended in subsequent events. The permeable pavement must include a suitable filtration layer providing treatment and must include a granular filter at the base separating the foundation from the sub-grade. The underlying soils must provide good contaminant attenuation potential (eg as recommended in BS5830 (so) and BS 13600 (soil) or other appropriate guidance). Alternative depth and soil construction may be considered, such that the soil/soil will not be suspended in subsequent events.

STEP 2C Determine the Combined Pollution Mitigation Indices for the Runoff Area

This is an automatic step which combines the proposed SuDS Pollution Mitigation Indices with any Groundwater Protection Pollution Mitigation Indices

Combined Pollution Mitigation Indices for the Runoff Area	Combined Pollution Mitigation Indices		
	Total Suspended Solids	Metals	Hydrocarbons
	0.7	0.6	0.7

Note: If the total aggregated mitigation index is > 1 (which is not a realistic outcome), then the outcome is fixed at $= 1.00$. In this scenario, the proposed components are likely to have a very high mitigation potential for reducing pollutant levels in the runoff and should be sufficient for any proposed land use (note where this assessment is required, the outcome would need more detailed verification).

STEP 2D Determine Sufficiency of Pollution Mitigation Indices for Selected SuDS Components

This is an automatic step which compares the Combined Pollution Mitigation Indices with the Land Use Hazard Indices, to determine whether the proposed components are sufficient to manage each pollutant category type

When the combined mitigation index exceeds the land use pollution hazard index, then the proposed components are considered sufficient in providing pollution risk mitigation.

In England and Wales, where the discharge is to protected surface waters or groundwater, an additional treatment component (e.g. over and above that required for standard discharge), or other equivalent protection, is required for the protection of surface waters or groundwater. Protected surface waters are those designated for drinking water abstraction. In England and Wales, protected groundwater resources are defined as Source Protection Zone 1. In Northern Ireland, a more precautionary approach may be required and this should be checked with the environmental regulator or a site by site basis.

Sufficiency of Pollution Mitigation Index	Sufficiency of Pollution Mitigation Index		
	Total Suspended Solids	Metals	Hydrocarbons
	Sufficient	Sufficient	Sufficient

Reference to local planning documents should also be made to identify any additional protection required for sites due to habitat conservation (see Chapter 7 for SuDS design process). The implications of developments on or within close proximity to an area with an environmental designation, such as a Site of Special Scientific Interest (SSSI), should be considered in consultation with relevant conservation bodies such as Natural England.