

## APPENDIX A.

### PRO-FORMA A - INDICATIVE DRAINAGE PROPOSAL

The information required below is considered the minimum amount of information that will allow our Drainage Engineers to be satisfied that the proposed approach is feasible and/or that the detailed design could be covered by way of a planning condition.

|    |                                                                                                                                                                                                                                                                              |  |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1  | Site location details with site address and national grid reference.                                                                                                                                                                                                         |  |
| 2  | A plan of the existing site, noting its topography and how it presently drains.                                                                                                                                                                                              |  |
| 3  | A plan of the proposed site, its topography and proposed future drainage arrangements. (A fully detailed system is not required at this stage - Just sufficient information that the proposed system requirements have been thought out and are achievable within the site). |  |
| 4  | Areas of permeable and impermeable land for existing site.                                                                                                                                                                                                                   |  |
| 5  | Area of permeable and impermeable land for proposed development site.                                                                                                                                                                                                        |  |
| 6  | Explanation of how the drainage hierarchy (Infiltration-watercourse-sewer) has been followed                                                                                                                                                                                 |  |
| 7  | Evidence that the site has an agreed point of discharge*                                                                                                                                                                                                                     |  |
| 8  | The existing surface water run-off rates from the site                                                                                                                                                                                                                       |  |
| 9  | An indication of the post development discharge rates from the site. This should include an explanation of how this has been calculated.                                                                                                                                     |  |
| 10 | An indication of the volume of attenuation storage that would be required on site. This should be based on the 100 year critical storm duration with an appropriate allowance for climate change for the site and the allowable discharge rate.                              |  |
| 11 | The likely method of attenuation to be used on site and explanation as to its choice.                                                                                                                                                                                        |  |
| 12 | A plan indicating a suitable location for the attenuation within the proposed development.                                                                                                                                                                                   |  |
| 13 | An explanation how it is proposed to manage and fund the maintenance of the proposed system over the lifetime of the development. This should consider the requirement to ensure that access is physical possible for such maintenance works.                                |  |
| 14 | For large phased sites an explanation of how the site will adequately consider surface water drainage at all stages of the development may be required                                                                                                                       |  |

\*When considering the different types of discharge, the following information should be provided

#### Infiltration:

If surface water is to be infiltrated on site, the applicant must provide percolation tests in accordance with BRE Digest 365 or CIRIA R156. Where percolation tests are not possible at the early stages of a development proposal, an indicative assessment based on available information (e.g. BGS Infiltration SuDS Map) will suffice for outline applications.

#### Watercourse:

If discharging to a watercourse, ditch, stream etc. the applicant must demonstrate that the system is an appropriate point of discharge for the site i.e. would take existing pre-development flows. If not then further information/assessment will be required to determine the suitability of the system to convey the proposed flows and volumes of water. Evidence will be required that the development will not increase risk to others. If the proposed discharge point is outside the development site then the applicant will need to demonstrate that the necessary permissions and/or agreements to achieve the connection are possible.

#### Public Sewer :

If discharging to a public sewer then evidence of agreement in principle from the owner/undertaker (e.g. Dwr Cymru / Welsh Water) will be required.

## PRO-FORMA B - DETAILED DRAINAGE DESIGN

In addition to the details outline in Pro-forma A, the details below are necessary to provide sufficient information so that the Council can be satisfied that the system will function as intended to achieve the above drainage criteria. This information is considered comprehensive enough to allow any condition related to surface water management placed on the development to be discharged.

| In addition to 1 to 14 in Pro-forma A, please include: |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 15                                                     | Detailed drawings/plans of the proposed drainage system including dimensions, levels, pipe sizes, manhole details etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| 16                                                     | Details of the proposed discharge control.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| 17                                                     | Details of the attenuation storage required based on the above discharge control and how this attenuation will be achieved on site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| 18                                                     | <p>Calculations or modelling of the proposed systems. This will need to show how the system operates to achieve the following drainage criteria:</p> <ul style="list-style-type: none"> <li>• No on-site flooding for events up to the 3.33% event.</li> <li>• How flooding (if any) between the 3.33% (1 in 30 year) and 1% (1 in 100 year) + climate change events are suitably contained on site.</li> <li>• Residual Risk and Designing for Exceedance: As well as consideration of modelled events, there should be an examination of what would happen in respect of storms in excess of the design event or system failures e.g. blockage. It is expected that the development will be designed to minimise the consequences of such scenarios.</li> </ul> |  |