

Proposed Section 104 Development at Halsnead Garden Centre, St. Helens  
UU Reference – 4200043162  
Design Assessment Category: Private SuDS

Please read: United Utilities undertake design reviews for SuDS features when offered for adoption and where adoptable assets discharge through SuDS features retained in private ownership. Both assessments are undertaken in accordance with the standards set out within the Sewerage Sector guidance. Where SuDS features are retained in private ownership, any design acceptance is based only an assessment of risk to operation of the assets offered for adoption, it is not an acceptance that the SuDS features meet the standards within the sector guidance. We accept no liability if further amendments are required throughout the planning process that have not been identified within our assessment.

Section 1 - Information required for SuDS assessment

Note: any item selected as ‘not submitted’ will need to be provided to support and progress the application to Technical Acceptance.

| Section 1<br>Information required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Submitted                           | Not submitted                       | N/A                                 | Designer<br>Tick to highlight where information noted as ‘not submitted’ has now been provided |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------|
| <div><div><div><div>SuDS component(s) Layout Plan(s). The type of basin(s) included within your design must be shown as one of the following;</div><div><div><div>Infiltration basin</div><div>Dry detention/attenuation basin</div><div>Vegetated detention/attenuation basin</div></div></div><div>See CIRIA C753 Chapter 23 (figure 23.5) for further guidance on permanent pool/aquatic bench design specifications</div></div></div></div>                                                                                                                                                                                                                                                                                                                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                                                       |
| <div><div><div>S104 SuDS Technical Appraisal Form: Infiltration viability (only required for infiltration basins)</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                                                       |
| <div><div><div>Sectional Drawing(s)</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                                                       |
| <div><div><div>Completed CIRIA SuDS checklist</div><div>See C753 The SuDS Manual Appendix B: Basin</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                                                       |
| <div><div><div>Completed CIRIA SuDS health and safety checklist (only required for Adoptable SuDS)</div><div>See C753 The SuDS Manual Appendix B: SuDS health and safety risk assessment checklist</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                                                       |
| <div><div><div>SuDS Component(s) Management &amp; Maintenance document</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                                                       |
| <div><div><div>Maintenance inspection plan</div><div>This must include access details for inspection and all maintenance requirements including machinery. The provision of tanker access must be allowed in the event of severe pollution so that emptying can be achieved.</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                                                                       |
| <div><div><div>Landscape plan and planting schedule</div><div>See UU S104 SuDS Landscape &amp; Planting guidance document for further information</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                                                                       |
| <div><div><div>SuDS hydraulic assessment information</div><div><div><div>Component(s) function is correctly noted as conveyance/attenuation/infiltration</div><div>See UU S104 SuDS guidance document, comment 12 for further information</div></div><div><div>Impermeable areas around the component have been included within the design</div></div><div><div>The longitudinal fall is represented in the model between 1 in 100 and 1 in 400 (this will not be applicable for infiltration basins)</div></div><div><div>For water quality purposes, provide a separate file for the 1 year, 30 minute event (this will not be applicable for infiltration basins)</div><div>See UU S104 SuDS guidance document, comment 5 for further information</div></div></div></div></div> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                                                                       |
| <div><div><div>Flood route plan for any exceedance flows from the SuDS Component</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                                                       |
| <div><div><div>Simple Index Approach (SIA) Assessment / Mitigation Indices for Water Quality (applicable for mixed use /commercial sites only)</div><div>See chapter 26.7.1 of CIRIA C753 for guidance</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                                                       |
| <div><div><div>Flood Risk Assessment</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                                                       |
| <div><div><div>Site Investigation containing geotechnical information</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                                                       |
| <div><div><div>Topographical survey</div><div>This drawing must be a full topographical survey of the existing site, with contour to record levels at 500mm intervals as a minimum for large greenfield sites. For small/urban/very flat sites, closer level differences may be required along with spot levels for onsite surface features and changes of level.</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                                                       |

Section 2 – High level SuDS considerations

| Comment number | Engineer General comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Yes                                 | No                       | TBC                                 | Designers response comments<br>If marked ‘NO’ or ‘TBC’, please amend the design or provide justification and mitigation of risks?                                                                                                                                  |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1              | The component is adequately distanced from any adjacent structures/features (i.e. existing sewers, pumping station, retaining walls etc.) and does not pose a risk in relation to flooding, pollution or slope stability?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |                                                                                                                                                                                                                                                                    |
| 2              | <div>Maintenance access is acceptable for the SuDS component(s) and responsibilities detailed in management and maintenance plan (i.e. adopting body / management company)<br/>See UU S104 SuDS guidance document, comment 1 for further information</div> <div>The ‘management and maintenance plan’ document doesn’t include responsible owners, this will be required as the maintenance activities will be split. I appreciate that the two basins will be private and therefore all maintenance responsibility will be with them but this will just need stating. You can add comment in for the following to state that UU will become responsible upon adoption;</div> <div><div><div>001-006 Surface water attenuation basin headwalls</div><div>007 and 008 Hydrobrake flow control manhole</div></div></div> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 19.08.22 – UU no longer has any responsibility past the headwalls discharging freely into the basins. Also there is a 3m footpath that skirts the basins which could be used if needed to park a vehicle, and the gradient around the headwalls are around 1 in 7. |

|   |                                                                                                                                                                                                                                                                                                                                 |                                     |                          |                          |  |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|--------------------------|--|
|   | <div> <div> 009 Below ground conveyance pipe network </div> </div> <div>010 Gully pots will be the local highway authority upon adoption of the road</div> <div>We will also require a maintenance access plan to detail where vehicles can park and the access provided to carry out the required inspection/maintenance</div> |                                     |                          |                          |  |
| 3 | Is the component outside any area of significant flood risk?<br><small>See UU S104 SuDS guidance document, comment 2 for further information</small>                                                                                                                                                                            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
| 4 | Is the topography for the site suitable for the components proposed?<br><small>See UU S104 SuDS guidance document, comment 3 for further information</small>                                                                                                                                                                    | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |

### Section 3 – Design requirements

**Note:** any points marked as ‘No’ or ‘TBC’ will require amendments to the design / drawings.

#### Infiltration / Detention Basin

For full design requirements, please refer to **Chapters 13 & 22** of CIRIA C753.

| Hydraulics (Chapter 22.4), Maintenance (Chapter 32) & Health and safety (Chapter 36)                                                                                                                                                                                                                                                    | Yes                                 | No                                  | TBC                                 | N/A                                 | (Designer)<br>Tick to confirm addressed with resubmission |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------------------------------|
| SuDS assessment acceptable?                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                                     |                                     |                                                           |
| Location and shape of basin is acceptable<br><small>See UU S104 SuDS guidance document, comment 4 for further information</small>                                                                                                                                                                                                       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| The water quality criteria for the 1 year, 30 minute event is acceptable (not applicable for infiltration basins)<br><small>See UU S104 SuDS guidance document, comment 5 for further information</small>                                                                                                                               | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                  |
| Aquatic bench should be a maximum depth of 400mm below the permanent water level (applicable to vegetated basins only)                                                                                                                                                                                                                  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                  |
| Planting and vegetation proposals are acceptable<br><small>See Section 104 SuDS Landscaping &amp; Planting guidance document</small>                                                                                                                                                                                                    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| The longitudinal fall between 1 in 100 and 1 in 400 (not applicable for infiltration basins)                                                                                                                                                                                                                                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| Maximum water depth in 1 in 100yr event is less than 1m<br><small>See UU S104 SuDS guidance document, comment 6 for further information</small>                                                                                                                                                                                         | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                  |
| Maximum water depth does not exceed 2m in most extreme design event and must be at least 500mm below the lowest FFL of any adjacent properties<br><small>See UU S104 SuDS guidance document, comment 6 for further information</small>                                                                                                  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| Length / width ratio for online detention basins checked and confirmed to be between 3:1 and 5:1                                                                                                                                                                                                                                        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| Slope gradients acceptable<br><small>See UU S104 SuDS guidance document, comment 7 for further information</small>                                                                                                                                                                                                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| Positioning of structures (including headwalls) do not result in any vertical drops higher than 1.0m.                                                                                                                                                                                                                                   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| The inlet and outlet flow path is maximised through the component and a low-flow channel has been provided and acceptable (not applicable for infiltration basins)<br><small>See UU S104 SuDS guidance document, comment 8 for further information</small>                                                                              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| Effective pre-treatment has been provided<br><small>See UU S104 SuDS guidance document, comment 9 for further information</small>                                                                                                                                                                                                       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| The outfalls into the component are able to discharge freely in 2yr event, or the surcharge risks acceptable                                                                                                                                                                                                                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| Flow control outlet diameter acceptable<br><small>See UU S104 SuDS guidance document, comment 10 for further information</small>                                                                                                                                                                                                        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| The basin is set above groundwater levels and the storage capacity of the basin is retained during periods of high groundwater. For infiltration, a minimum of 1m clearance below invert level of the system to ground water level is achieved<br><small>See UU S104 SuDS guidance document, comment 11 for further information</small> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| A liner has been proposed (if applicable to the site type) and the specification is acceptable<br><small>See UU S104 SuDS guidance document, comment 11 for further information</small>                                                                                                                                                 | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| Erosion protection measures at inlet points acceptable<br><small>See UU S104 SuDS guidance document, comment 13 for further information</small>                                                                                                                                                                                         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| Suitable head loss’ applied in the model (if applicable)<br><small>See UU S104 SuDS guidance document, comment 13 for further information</small>                                                                                                                                                                                       | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| The flood routing for exceedance flow is acceptable<br><small>See UU S104 SuDS guidance document, comment 14 for further information</small>                                                                                                                                                                                            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| Areas above the normal water elevations are sloped towards the channel to allow for effective drainage                                                                                                                                                                                                                                  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| Proposed inlet(s) and outlet headwall details acceptable (for an infiltration basin, an overflow headwall could be considered the outlet)                                                                                                                                                                                               | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>                                  |
| Additional criteria below for infiltration basins;                                                                                                                                                                                                                                                                                      |                                     |                                     |                                     |                                     |                                                           |
| The materials used in the infiltration system (aggregate and engineered soils) are acceptable<br><small>See UU S104 SuDS guidance document, comment A for further information</small>                                                                                                                                                   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                  |
| Is the bottom of the system flat to provide uniform ponding<br><small>See UU S104 SuDS guidance document, comment B for further information</small>                                                                                                                                                                                     | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                  |
| Does the system drain down from full to half full within a 24 hour period?<br><small>See UU S104 SuDS guidance document, comment C for further information</small>                                                                                                                                                                      | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                  |

The Engineer will make comments in the column named ‘Engineers comments’. Should these comments ask questions please ensure that you provide response comments (with clarification and or justification) in the adjacent column.

Note: Designer’s response comments **must** be given to any Engineer comments for the application to progress to Technical Acceptance

| Comment number | Engineer comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Designers comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Status          |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1              | <p>Please ensure anything with the tick box selected with ‘no’ or ‘TBC’ is addressed upon resubmission and any missing information is either provided or shown on the relevant drawings.</p> <p>Thanks for clarifying this point. I have therefore transferred all existing comments from the previous checklist onto this one and assessed the components against different design requirements above. I’m happy to have an MS Teams meeting with you to run through any of these for clarity prior to your next resubmission.</p> <p>In relation to sediment management, please see the supporting S104 SuDS guidance document for further guidance.<br/>Please confirm if the area isolated at the inlet is for the forebay entirely or is the erosion protection within this also? This will need to be clearly shown on the layout and sectional drawings.</p> <p>As the inlet S16.13HW has an inflow of nearly 5m/s &amp; S19.8HW is just over 4m/s, erosion control may need to be considered</p> <p>Having reviewed the recent hydraulic file I’m unable to locate pipe numbers 15.014 through to 15.018 and onwards through the lower basin? Your erosion protection proposal should be adequate enough but I will just need to confirm the final velocity proposals entering the basin.</p> | <p>This is not a pond. There will not be a permanent water level, in dry flow conditions this attenuation basin should be empty.<br/>Understandably this is quite a deep attenuation basin and will not comply with the required &lt;100mm flow. As such I shall attach the required drawings and documents for an attenuation basin.</p> <p>I have added the erosion protection to the plan for clarity.</p> <p>Either way inlet protect will most likely be required on the S16.13HW, I am suggesting a 150mm thick wire mattress gabion rip rap as seen on the HW details. What would you suggest?</p>                                                                                                                                                                                                                                      | Action required |
| 2              | <p>1) — Please ensure the missing information from section 1 is provided upon resubmission. Confirmation will be required for the hydraulics to ensure the data is correct based on depths and m² details.</p> <p>If you require any further clarity or assistance with the information required please give me a call (i.e. 1yr 30min event information for residence time if &lt;100mm flow cannot be achieved)</p> <p>This information doesn’t have to be provided in an MDX PDF format, this can be a separate document and can be calculated by the following; length of low flow channel or component (m) / velocity (m/s)* = residence time (seconds)</p> <p>-</p> <p>*Velocity through the component must be less than 0.3m/s during a <b>1yr 30min event</b></p> <p>2) — Please also provide ‘word editable versions of the CIRIA component checklists within you resubmission? These were provided in our initial response and will be edited on both ends, PDF won’t be accepted</p>                                                                                                                                                                                                                                                                                                       | <p>I have added the 1 yr 30min event calculations with submission.</p> <p>22.02.22</p> <p>1) — The way we usually model basins in Microdrainage is by using a ‘false’ pipe and associating the area for the basin to the headwall at the end of the basin. However, this system does not allow an accurate velocity within the basin. I have now model the aforementioned pipe as the low flow channel. Which should give me a more accurate information regarding the velocity within the basin. Also Microdrainage only provides maximum velocity.</p> <ul style="list-style-type: none"><li>● — Upper basin has a maximum velocity of 0.2m/s</li><li>● — Upper basin has a depth of 0.079m</li><li>● — Lower basin has a maximum velocity of 0.7m/s</li><li>● — Lower basin has a depth of 0.236m</li></ul> <p>2) — Noted and included.</p> | Accepted        |
| 3              | <p>Please ensure the headwall details are in accordance with the ‘Design &amp; Construction Guidance (DCG)’, not UU standard details as these have now been superseded.</p> <p>There are details in the DCG for this in reference to drawing ‘TAY90-1070-rev C’, please see figure C3 and reference them in accordance with the standard details within the DCG, not SFA</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>22.02.22</p> <p>Noted and amended.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Completed       |
| 4              | <p>Having reviewed the flood routing plan, it would appear that any flow from basin 1 would enter basin 2, has this been considered for the worst case scenario?</p> <p>Fully appreciate your comments and it’s just a due diligence check but as the topography drops off after lower basin this would present a significant flood risk offsite onto Fox’s Bank Lane? Has this point been covered with the LLFA?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>Our design caters for the 1 in 100-yr plus 40% Climate change. While maintaining a substation freeboard. The flood flow routing plan will only be used in a biblical event or blockage. And surely water flowing from one overspilling basin to the other is desirable.</p> <p>22.02.22</p> <p>I will ask the LLFA regarding this issue.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Action required |
| 5              | <p>1) — Please confirm the longitudinal fall, this must be a minimum of 1:400 gradient. This information will need to be detailed on both the sectional drawings and the S104 Agreement Plan</p> <p>2) — Max water depth in 100yr (<b>without climate change</b>) is less than 1m</p> <p>3) Maximum water depth does not exceed 2m in most extreme design event and must be at least 500mm below the lowest FFL of any adjacent properties</p> <p>Unfortunately this will need to be looked into as 2.5m breaches the maximum depth in CIRIA which is also a minimum design requirement. Please can you also confirm that the revised maximum water level is at least 500mm below the lowest FFL of any adjacent properties?</p> <p>Furthermore, flow does not appear to be free flowing entering lower basin 2 in the 2yr event, it is considerably surcharged. Upper basin 1 levels appear to be fine.</p> <p>4) Please try and slacken slope gradients around headwalls to ensure safe access for inspection, preferably 1:5 and also ensure that the slope gradients are noted on the S104 Agreement Plan</p> <p>Thanks for amending this, please can you ensure the S104 Agreement Plan also shows these revised gradients</p>                                                                   | <p>22.02.22</p> <p>1) — The gradient is 1 in 400</p> <p>2) — Max water depth in the 100yr event is: 1.961m</p> <p>3) Maximum water depth in the most extreme event is 2.5m</p> <p>4) The gradients on plan do not reflect how the gradients will be once the headwall is placed in, as shown on the new sectional drawings.</p> <p>5) — A new liner has been chosen. As seen in the new sectional drawings.</p> <p>19.08.22 – The water level is above the 2m limit therefore everything downstream of the headwalls will be maintained privately and UU’s involvement stops at the headwalls.</p>                                                                                                                                                                                                                                             | Choose an item. |

|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                 |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------|
|   | <p>5) – I not the proposal for puddle clay liner to be utilised, please ensure any lining is in accordance with our S104 technical guidance – Specification of chosen liner will be required. Acceptable materials can range from butyl rubber, bentonite sheeting or clay – see CIRIA C753 chapter 23.9.1. If a clay liner is to be used, the thickness of clay should be 0.5m-1.0m to ensure complete impermeability. If an impermeable membrane is proposed, cover must be provided and noted to protect it during desilting / maintenance works.</p> <p>These are some of the main points that will need confirming but there will also be some further points marked ‘no’ or ‘TBC’ that need reviewing above</p>                                                                                                                                                                                                                                 |  |                 |
| 6 | <p>Thanks for considering forebays as the form of sediment management.</p> <p>For upper basin 1 considerations will need to be made for the other inlet S18.8, you can either include a further forebay or a catch pit manhole upstream. If you choose a catch pit manhole the sump must be between 300-500mm and we will require a sectional 1:20 drawing detailing your proposals. Either way S18.8 will require erosion protection as the velocity for pipe 18.006 is 4.2m/s</p> <p>For lower basin 2 a forebay will not be required at the inlet, a low flow channel can run from headwall S15.17. Considerations will need to be made for inlet S1.21, maybe the forebay can just be moved and include some erosion protection? Alternatively you can choose to use a catch pit manhole upstream. If you choose a catch pit manhole the sump must be between 300-500mm and we will require a sectional 1:20 drawing detailing your proposals</p> |  | Action required |
| 7 | Please confirm that the basins are set above groundwater levels and the storage capacity of the basin is retained during periods of high groundwater?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | Action required |
| 8 | Please confirm if the appropriate headloss has been applied for any areas of erosion protection or catch pit manholes and is visible within the hydraulic pdf files                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | Action required |

## Section 4 – Drawing requirements

| S104 Agreement Plan and Land Registry Plan requirements                                                                                                                                                                  | Yes                      | No                                  | TBC                      | N/A                                 | (Designer)<br>Tick to confirm addressed with resubmission |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|-----------------------------------------------------------|
| Both drawings contain all relevant component information?                                                                                                                                                                | <input type="checkbox"/> | <input checked="" type="checkbox"/> |                          |                                     |                                                           |
| If the component is to be offered for adoption then the following will be required;                                                                                                                                      |                          |                                     |                          |                                     |                                                           |
| Component offered for adoption is coloured purple                                                                                                                                                                        | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                  |
| A 2m easement is be applied around the full perimeter of the component, coloured in yellow and dimensioned                                                                                                               | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                  |
| Right of way to be secured for any private access that could be used to facilitate inspection or maintenance to the component, ancillaries or point of discharge. If applicable then this will need to be coloured brown | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                  |

|                                                                                                                                                                                                                          |                                     |                          |                                     |                          |                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|
| If the component is to be remain private then the following will be required;                                                                                                                                            |                                     |                          |                                     |                          |                          |
| Component is coloured black                                                                                                                                                                                              | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| Right of way to be secured for any private access that could be used to facilitate inspection or maintenance to the component, ancillaries or point of discharge. If applicable then this will need to be coloured brown | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|                                                                                                                                                                        |                                     |                                     |                          |                          |                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| The following requirements are relevant to the S104 Agreement Plan only;                                                                                               |                                     |                                     |                          |                          |                          |
| Component type noted correctly (i.e. infiltration/attenuation-detention basin/vegetated basin)                                                                         | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Dimensions shown (length at longest point in addition to the width at widest point, both at the bottom and top of the component)                                       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The area of the basin in m² noted on the drawing                                                                                                                       | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The inlet level and outlet level are to be clearly noted, in addition to the top of bank level and bed level                                                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Storage volume is noted in m³ and matches the hydraulic model                                                                                                          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Contours clearly shown and gradient of the side slopes labelled                                                                                                        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The position of boreholes used to confirm and understand geotechnical conditions are shown and referenced in accordance with the ground condition investigation report | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Full design detail shown (e.g. forebay, permeable berm etc. as applicable) / (Permanent pool and aquatic bench for vegetated basins)                                   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Erosion protection measures detailed at inlet points                                                                                                                   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Low flow channel should be clearly shown with supporting details (not applicable for infiltration basins)                                                              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ancillaries are clearly identified (i.e. catch pit manholes and flow control manholes)                                                                                 | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| Drawing number: TAY90 1002 |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                        |                 |
|----------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------|
| Rev.                       | Comment number. | Engineers comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Designer's response comments                                                                                           | Status          |
| C<br><br>E                 | 1               | Please ensure anything with the tick box selected with 'no' or 'TBC' is addressed on the revised drawing<br><br>Right of way TBC upon receipt of maintenance inspection plan so it's clear how the headwalls and flow control manholes will be accessed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                        | Action required |
| D                          | 2               | <del>Just for our understanding, can you advise why they are to remain private? The same design requirements will still apply no matter the decision but it would be useful to understand the reasoning. If they are still to remain private, rights of way access must be provided for the headwalls and hydro-brake manholes.</del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <del>The basin to remain private.</del><br><br><del>The decision to keep the basin private lies with the client.</del> | Accepted        |
| D<br><br>E                 | 3               | In relation to the level information required, some of the water levels are missing and other information is dotted around the drawing. If there's any way of the information being captured in a contents table for each component that would be greatly appreciated.<br><br>Here's an example of what I meant but with the specific details applicable to these basins if possible; <div>             VEGETATED DETENTION BASIN<br/>             TO ATTENUATE FLOWS UP TO<br/>             1:100 YEAR STORM + 40%<br/>             CLIMATE CHANGE<br/>             BASE LEVEL 50.645m<br/>             MAX WATER LEVEL 51.316m<br/>             MIN TOB LEVEL 51.750m<br/>             FREEBOARD 434mm<br/>             TEMPORARY STORAGE MAX<br/>             VOLUME: 434m³           </div> Please can you ensure m² and max water depths are included as this will allow us complete a depth and m² check against the hydraulic calcs for each basin? Taking into consideration that there may be changes made to the water depth of lower basin 2 | <del>A table of levels information has been added.</del><br><br>22.02.22<br>Noted and amended.                         | Action required |
| E                          | 4               | <del>Please can you make the easements for the incoming, intermediate and outgoing pipework bolder (yellow) on the drawing and include dimensions similar to the S104 Agreement Plan, the development boundary will also need to be green and you can remove the sectional view as these have been provided on two separate drawings</del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 22.02.22<br>Noted and amended.                                                                                         | Completed       |
| E                          | 5               | <del>Please can you ensure your contours are changed to black as opposed to red and ensure side slopes are noted on this drawing</del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 22.02.22<br>Noted and amended                                                                                          | Completed       |
|                            |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                        | Choose an item. |

| Drawing number: TAY90 1006 |                 |                                                                                                                                                                                                                                                         |                                               |                 |
|----------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------|
| Rev.                       | Comment number. | Engineers comments                                                                                                                                                                                                                                      | Designer's response comments                  | Status          |
| A<br><br>B                 | 1               | Please ensure anything with the tick box selected with 'no' or 'TBC' is addressed on the revised drawing<br><br>Right of way TBC upon receipt of maintenance inspection plan so it's clear how the headwalls and flow control manholes will be accessed |                                               | Action required |
| A                          | 2               | <del>If the basins are to remain private we will require the easements for the incoming, intermediate and outgoing pipework showing more boldly on the drawing and these will need dimensions</del>                                                     | Easements colour changed and dimensions added | Completed       |
|                            |                 |                                                                                                                                                                                                                                                         |                                               | Choose an item. |

| Sectional view drawing                                                                                                                                              | Yes                                 | No                                  | TBC                                 | N/A                      | (Designer)<br>Tick to confirm addressed with resubmission |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-----------------------------------------------------------|
| Areas above the normal water elevations are sloped towards the channel to allow for effective drainage                                                              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>                                  |
| Maximum water levels for the following storm events; 2, 30, 100 & 100+cc year events                                                                                | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>                                  |
| For sites with Pumping Stations, the 200 year water level also needs to be noted to confirm compliance with Design & Construction Guidance (D5.1.2)                 | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>                                  |
| Maximum water depth shown                                                                                                                                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>                                  |
| The inlet level and outlet level are to be clearly noted, in addition to the top of bank level and bed level                                                        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>                                  |
| Slope gradients shown                                                                                                                                               | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>                                  |
| Full design detail shown (e.g. forebay, permeable berm etc. as applicable) / (Permanent pool and aquatic bench for vegetated basins)                                | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                                  |
| Erosion protection measures detailed at inlet points                                                                                                                | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>                                  |
| Low flow channel should be clearly shown with supporting details (not applicable for infiltration basins)                                                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>                                  |
| Materials to be clearly shown and specified on the drawing<br><small>See UU S104 SuDS guidance document, comment 15 &amp; comment A for further information</small> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>                                  |

| Drawing number: TAY90 1090 |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                       |                 |
|----------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Rev.                       | Comment number. | Engineers comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Designer's response comments                                                                                                                                                                                          | Status          |
| A                          | 1               | <p>Please ensure anything with the tick box selected with 'no' or 'TBC' is addressed on the revised drawing</p> <p>Please include a max water depth measurement, any proposed erosion protection and locations of forebays</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                       | Action required |
|                            | 2               | <p>In order to de-clutter the drawing, please can you remove all level information from sections A-A &amp; B-B and just annotate on the section the information noted in the above checklist if possible? This can be in the form of a contents table if easier. Please also include a C-C section to show the low flow channel proposals.</p> <p>You can even remove the storm data, headwall details, location plan and plan view of this as this is duplicated from the S104 Agreement Plan, this drawing is purely for sectional views and will allow you to include a full design view as per above table and rescale the section so details are easier to see.</p> <p>Please can you include the low flow channel on a sectional view, ensuring that it is 100-150mm deep (no deeper than base of headwall aprons)? Minimum width size (inlet/outlet size) and maximum width size (no wider than width of headwall)?</p> | <p>Noted and amended</p> <p>22.02.22</p> <p>I have made new drawings for these sectional drawings and reverted the headwall details back to the previous revision.</p> <p>The new drawings are now 1090 and 1091.</p> | Completed       |
| E                          | 3               | <p>For both sectional drawings, please ensure water levels for the 2yr &amp; 100yr +cc levels are provided and the 30yr &amp; 100yr levels already provided are clearer as they're quite bold.</p> <p>We will need to ensure that the inlets and outlets are not surcharged in the 2yr event and also that the max water level in the most extreme event does not breach 2m</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>22.02.22</p> <p>I have added these water levels.</p>                                                                                                                                                               | Completed       |
| E                          | 4               | <p>Please confirm the longitudinal fall, this must be a minimum of 1:400 gradient. This information will need to be detailed on both the sectional drawings and the S104 Agreement Plan</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>22.02.22</p> <p>The basin is 1 in 400.</p>                                                                                                                                                                         | Completed       |

| Drawing number: TAY90 1091 |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                        |                 |
|----------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Rev.                       | Comment number. | Engineers comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Designer's response comments                                                                                                                                                                                           | Status          |
|                            | 1               | <p>Please ensure anything with the tick box selected with 'no' or 'TBC' is addressed on the revised drawing</p> <p>Please include a max water depth measurement, any proposed erosion protection and locations of forebays</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                        | Action required |
|                            | 2               | <p>In order to de-clutter the drawing, please can you remove the location plan along with all level information from sections A-A, B-B &amp; C-C, just annotate on the section the information noted in the above checklist if possible? This can be in the form of a contents table if easier.</p> <p>You can even remove the storm data, headwall details, location plan and plan view of this as this is duplicated from the S104 Agreement Plan, this drawing is purely for sectional views and will allow you to include a full design view as per above table and rescale the section so details are easier to see.</p> <p>Please can you include the low flow channel on a sectional view, ensuring that it is 100-150mm deep (no deeper than base of headwall aprons)? Minimum width size (inlet/outlet size) and maximum width size (no wider than width of headwall)?</p> | <p>Noted and amended.</p> <p>22.02.22</p> <p>I have made new drawings for these sectional drawings and reverted the headwall details back to the previous revision.</p> <p>The new drawings are now 1090 and 1091.</p> | Completed       |
| A                          | 3               | <p>For both sectional drawings, please ensure water levels for the 2yr &amp; 100yr +cc levels are provided and the 30yr &amp; 100yr levels already provided are clearer as they're quite bold.</p> <p>We will need to ensure that the inlets and outlets are not surcharged in the 2yr event and also that the max water level in the most extreme event does not breach 2m</p> <p>See comment 5 in section 3 regarding the above</p>                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>22.02.22</p> <p>I have added these water levels.</p>                                                                                                                                                                | Action required |
|                            | 4               | <p>Please confirm the longitudinal fall, this must be a minimum of 1:400 gradient. This information will need to be detailed on both the sectional drawings and the S104 Agreement Plan</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>22.02.22</p> <p>The basin is 1 in 400.</p>                                                                                                                                                                          | Completed       |
|                            | 5               | <p>Some information is still marked as 'upper' when it should be 'lower' — just to avoid confusion</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>22.02.22</p> <p>Noted and amended.</p>                                                                                                                                                                              | Completed       |