

SUMMARY NOTE

TO: Mid Sussex District Council
FROM: Hilson Moran, Maria Paola Espa, Emma Rowlands
DATE: 17/08/2026
FILE REF: 38911/DM/26/1560
PROJECT: The Byre
SUBJECT: Response to the LPA letter and consultation with the LLFA

Introduction

This summary note has been prepared in response to Mid Sussex District Council (MSDC) letter dated 14th July 2026 to address the following comments:

“The applicant has stated that the site is unsuitable for infiltration for SuDS because of the underlying clay bedrock. BRE365 infiltration testing will be required to evidence this. This can be conditioned if a suitable alternative strategy is provided. Whilst an alternative method has been proposed we have concerns with the current information. The applicant has proposed a crossing and outfalls into the Ordinary Watercourse within the development. We will need to see evidence of engagement with the Lead Local Flood Authority to apply for Ordinary Watercourse Consent for the proposed works.”

The scope of this note is to provide a summary of the consultation with West Sussex County Council (WSCC) carried out on the 6th August 2026 and confirmation that the proposed strategy has been reviewed and considered suitable for the site.

Consultation with WSCC

On the 17th July a request for Ordinary Watercourse pre-application advice was submitted to WSCC. As part of the request, the design team provided information on the proposed development, location of the existing culvert within the vicinity of the site, the site-specific FRA and proposed drainage strategy, and the MSDC letter to inform the request for engagement and consultation with the Lead Local Flood Authority (LLFA).

During the meeting, the following key points were discussed and subsequently agreed with WSCC. WSCC provided a formal advice document after the meeting which summarised these key points (Appendix A).

- If the new outfall to the watercourse is an ‘off-line headwall’, which is either flush with the existing bank profile or slightly set back into the existing bank profile, then this does not fall within the scope of the Ordinary Watercourse Consent (OWC). An OWC is only required for structures that have the potential to obstruct the flow within an ordinary watercourse, and structures that do not encroach into the flow channel cannot obstruct the flow within the watercourse. WSCC requested that drainage strategy drawing submitted as part of the FRA and drainage strategy and the construction detail drawings of the off-line headwall clearly state that *“No part of the headwall structure is to encroach beyond the existing bank profile and protrude into the flow channel of the*

receiving ordinary watercourse", in order for them to conclude that the headwall will not fall within the scope of an OWC.

- An OWC is not required if no alterations are proposed to the existing culvert structure, or for routine maintenance or "like for like" repairs to the existing structure that do not alter the flow through it. WSCC advised that it should be determined whether the existing culvert is fit for purpose to withstand car loading for the lifetime of the development. If only "like for like" repairs are needed, then no OWC is required. However, if any investigation showed that existing culvert is not hydraulically or structurally suitable, and that it needed to be replaced or altered, then a OWC will likely be needed, as this is required for any works that alter an existing culvert in a way that affects the flow of the watercourse that passes through the culvert.
- The OWC process does not consider discharge rates or discharge volumes from a development, and therefore these matters should be agreed with the Local Planning Authority's Drainage Consultee through the planning process. The LLFA will only comment on such matters for major applications, and as this is a minor application, it is the Mid Sussex District Council Flood Risk and Drainage Team who are the relevant consultee for these matters.

Actions and recommendations

The following actions are recommended following the consultation with the LLFA:

- 1. Hilson Moran to update the drainage drawing with a note advising that no part of the headwall structure is to protrude into the flow of the channel of the ordinary watercourse.**

The drainage strategy drawing has been updated within the final version of the report as indicated by WSCC. Please refer to 38911-HML-XX-XX-RP-U-870001 P03 submitted alongside this report.

- 2. Shire Barn Developments Ltd to confirm that no alterations will be made to the existing culvert structure, and only "like for like" repairs will take place.**

The following will be confirmed by the client before construction works. If additional works are scoped other than resurfacing the existing culvert, the client will apply for OWC following WSCC culvert policy (Appendix B) as recommended above.

Appendix A – WSCC Ordinary Watercourse Consent Pre-Application Advice

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By email to:

06 August 2026

Dear Maria

Ordinary Watercourse Consent Pre-Application Advice LDGP-2026-010 – Site at The Byre

WSSCC Lead Local Flood Authority (LLFA) Ordinary Watercourse Consent (OWC) Pre-Application Advice has been sought for the above scheme.

A virtual meeting was completed on 6th August 2026 and further to this the LLFA have the following remarks:

1. Our pre-application service offers:

- specific advice on what you need to consider for the proposed works on your site in order to adhere to the Land Drainage Act 1991
- advice about the level of detail we need from you in order for us to validate any future ordinary watercourse consent applications.
- one virtual meeting to discuss potential applications/proposals.

2. Advice was sought on 17th July 2026.

Off-Line (SuDS Discharge) Headwall Design and Placement

3. **Off-line** headwalls are headwall structures that house a discharge to an ordinary watercourse (typically from a development's SuDS features).

- a. All **off-line** headwalls should be designed and constructed so that they are set either flush with the existing bank profile or are slightly set back into the existing bank profile, of the receiving ordinary watercourse.
- b. If the plans and construction detail drawings of off-line headwalls clearly state that "*No part of the headwall structure is to encroach*

*beyond the existing bank profile and protrude into the flow channel of the receiving ordinary watercourse” then such structures will **not** fall within the scope of the ordinary watercourse consent process (as consent is only required for structures that have the potential to obstruct the flow within an ordinary watercourse, and structures that do not encroach into the flow channel cannot obstruct the flow within the watercourse). Inclusion of such a note on all relevant plans and drawings will ensure that, throughout both the planning and consenting processes, all relevant parties are aware that LLFA OWC requirements have been adhered to.*

- c. Consent would only be granted for an off-line headwall that **did** protrude into the flow channel of a receiving watercourse where evidence is provided or insurmountable constraints that made encroachment unavoidable, and that the encroachment did not significantly increase flood risk.
- d. For clarity, the OWC process does not consider discharge rates or discharge volumes from a development’s SuDS scheme to the receiving ordinary watercourse as these matters need to be agreed with the Local Planning Authority’s Drainage Consultee through the planning process. (As this is a minor application it is the Mid Sussex District Council Flood Risk and Drainage Team who are the relevant consultee, as we here at the LLFA only comment on such matter in relation to major applications).

The culverted section of ordinary watercourse under the access to the site

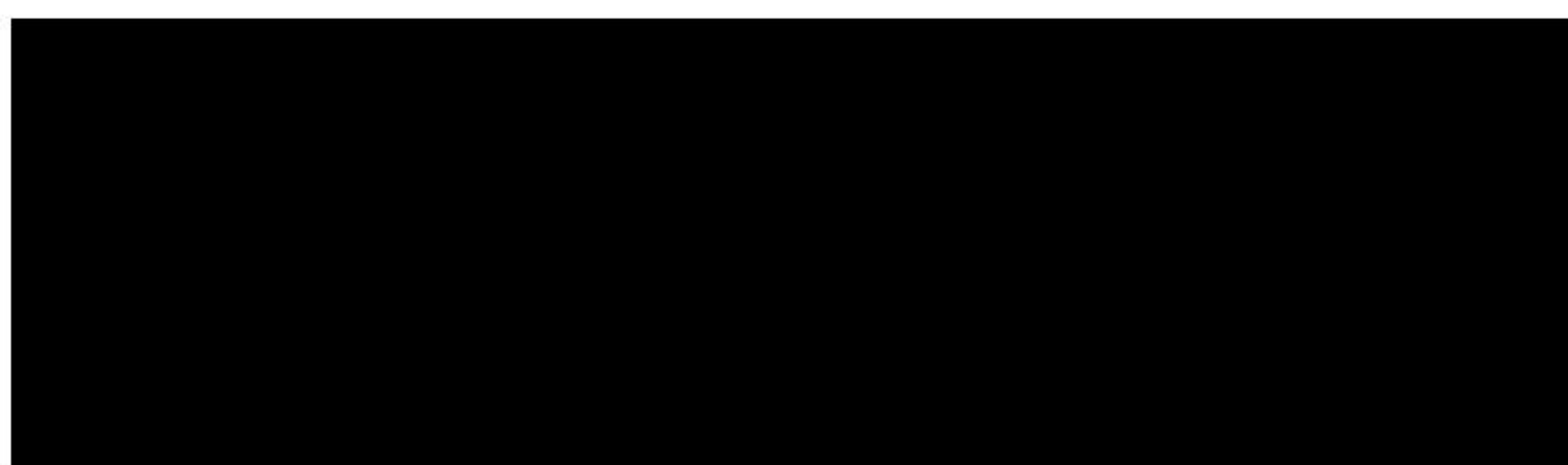
4. For clarity:

- a. **Consent is required for** any works that alter an existing culvert in a way that affects the flow of the ordinary watercourse that passes through the culvert. Therefore, if any subsequent investigation into the nature and condition of the existing culvert reveals that it is unsuitable (either hydraulically, or structurally) and needs to be replaced or altered, then consent would be required prior to the commencement of any such works.
- b. Note: “Temporary Consent” may also be required if the flow within the watercourse also needs to be diverted/over-pumped to facilitate any permanent works to the culvert.
- c. **Consent is not required** if no alterations are proposed to the existing culvert structure (e.g. if the culvert is deemed to be suitable to serve the existing development). Additionally, no consent is required for “routine maintenance” and “like for like”

repairs to the existing structure that do not alter the flow through the existing structure.

5. In the "OWC pre-application advice" application form you stated: *"Our understanding is that the Ordinary Watercourse is already culverted under the existing track – consequently, there is no proposal to culvert additional watercourse, just to resurface the track and **ensure that the existing culvert is fit for propose to be able to withstand car loading for access to the new dwellings**."* The part of that passage I have **underlined** is the key consideration here. Answers need to be obtained for questions about whether the existing structure fit for purpose for the lifespan of the proposed development, from both hydraulic and structural suitability perspectives.
6. In the pre-application advice meeting it was suggested that the existing culvert may not have appropriate headwalls at either end (to protect against erosion/undermining etc.) and that it had yet to be determined if the culvert, its bedding, and protective cover, were suitably robust for the loadings/use that it will be subjected to through both the construction phase and through the lifespan of the proposed development. Therefore, further investigations need to be undertaken to determine if works that fall within the scope of the ordinary watercourse consent will need to be undertaken to this structure. (Note: New "online" headwalls [i.e. headwalls at the ends of a culvert through which the flow in an ordinary watercourse passes] do fall within the scope of the ordinary watercourse consent process).
7. We would like to take this opportunity to bring your attention to the attached (recently refreshed) LLFA Culvert Policy and the Ordinary Watercourse Consent Fee Structure Document.
8. I trust that you found the meeting useful and obtained all the necessary information required. Should you have any further queries prior to submitting your substantive application then do not hesitate to contact us.
9. If you require consent from us now or in the future, please visit our website and complete the online application process: Ordinary watercourse land drainage consent - West Sussex County Council

Yours sincerely,



Duncan Keir

Flood Risk Management Team

Appendix B – WSCC Culvert Policy

**West Sussex County Council
(WSCC)**

**Lead Local Flood Authority
(LLFA)**

Culvert Policy



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1. Introduction

This policy has been produced by West Sussex County Council (WSCC), the Lead Local Flood Authority (LLFA), for use by anyone seeking to install, alter, or remove a culvert¹ on an ordinary watercourse.

¹A culvert is a structure (typically a circular pipe, rectangular box section or brick arch) that allows a watercourse to flow below the surface of the ground, under a road, railway, footpath, bridleway, track, or above ground obstruction.

This document provides detailed good practice guidance, regarding the culverting of **ordinary watercourses**², and should be used as a reference document for design purposes.

²Under UK "flood risk management" and "drainage" legislation there are two main types of "watercourses":

- **Designated Statutory Main Rivers:** *These are strategically important drainage features that are all mapped and can be found on the [national main river map](#).*
- **Ordinary Watercourses:** *Section 72 of the Land Drainage Act 1991 defines an **ordinary** watercourse as a watercourse that does **not** form part of a main river. The term "watercourse" includes all other rivers and streams and all ditches, drains, cuts, culverts, dikes, sluices, sewers (other than public sewers within the meaning of the Water Industry Act 1991) and passages, through which water flows.*

This culvert guidance document applies to ordinary watercourses only; the Environment Agency should be contacted for guidance on the culverting of, or the undertaking of other works to, or near, 'designated statutory main rivers'.

This culvert guidance document replaces the previous "West Sussex County Council LLFA Culvert Policy" document.

2. Ordinary Watercourse Consent

The culverting of an ordinary watercourse, or the alteration of an existing ordinary watercourse, requires 'ordinary watercourse consent' under Section 23 of the Land Drainage Act 1991 (as amended). WSCC, as the LLFA, are responsible for processing 'ordinary watercourse consent' applications. Please be fully aware that 'Ordinary Watercourse Consent' must be sought and formally granted in writing **prior to the commencement of** any of the following works/activities:

- The installation of a culvert in any ordinary watercourse.
- The removal of a culvert from an ordinary watercourse.
- The alteration of a culvert in a manner that could potentially obstruct the flow of the ordinary watercourse.
- The installation of a structure within the flow channel of an ordinary watercourse that could potentially obstruct the flow.
- The diversion or infilling of any ordinary watercourse.
- The construction of any mill, dam, weir, or other similar obstruction to the flow of any ordinary watercourse or raising or otherwise altering any such obstruction.

The above list should not be considered exhaustive. If you are not sure if the work you are proposing requires consent, then please contact the LLFA. (owc@westsussex.gov.uk).

The ordinary watercourse consent application form, along with guidance on how to apply is available on the [West Sussex Lead Local Flood Authority \(LLFA\) website](#).

Landowners and developers are strongly encouraged to seek advice as early as possible when considering a culverting proposal. A [pre-application advice service](#) is offered by the LLFA. Early engagement helps ensure sufficient time for review and reduces the risk of overall programme delays.

Please note: If consent for a new culvert is granted the work must be carried out in strict accordance with the approved design, particularly as consent usually comes with a condition that requires verification of compliance with the approved designs/drawings.

3. Planning Permission

The requirement to obtain ordinary watercourse consent is independent of planning permission. The granting of planning permission does not imply or guarantee that land drainage consent will be approved and the granting of ordinary watercourse consent does not imply or guarantee that planning permission will be granted.

- Anyone wishing to construct a new culvert or remove an existing culvert is responsible for establishing if planning permission is required for the work.
- Applicants must ensure compliance with all relevant planning conditions attached to their permission.
- Any work must comply with any local council land drainage byelaws, where applicable.

4. The LLFA's General Opposition to Culverting

Watercourses fulfil many roles in today's environment. They provide drainage for developed and agricultural land and are vital drainage assets. They are also key features of the landscape and provide habitats for a wide variety of wildlife. It is therefore important that watercourses and their associated habitats are protected and enhanced for the benefit of future generations, which is why **the LLFA maintains a general opposition to the culverting of ordinary watercourses because of the potential for adverse effect on flood risk and ecology.** This position is a result of the legal requirements of the Water Framework Directive (2003) which states that the quality of a watercourse should not be reduced and the fact that culverting often results in detrimental effects, such as:

Increased Flood Risk:

- Culverting can reduce the conveyance capacity of a watercourse; this can lead to the overwhelming of the culvert entrance which can result in flooding.
- Culverting can reduce the flood water storage capacity of the watercourse and therefore can increase flood risk.
- Culverting presents a barrier to overland run-off (and/or flood water) from entering the watercourse along the length of the culverted section, increasing flood risk associated with this run-off.

- Culverts, due to their confined nature, have an increased risk of blockage compared to open watercourses. Plus, due to the enclosed nature of culverts, those blockages are more difficult to observe and therefore less likely to be resolved before they cause flooding.
- Culvert screens can become blinded and result in flooding.
- Culverts deteriorate over time and defects in the structure of a culvert, such as misaligned joints, cracked and deformed sections of pipe, are hidden from view and difficult to repair. Therefore, such defects are less likely to be resolved before they deteriorate, which can cause blockages/flooding.
- It is more difficult to create a new surface water drainage connection to a culvert than an open watercourse.

Detrimental Ecological Effects:

- Culverts are virtually ecologically sterile when compared to open watercourses (that usually offer a rich ecological habitat).
- Culverting results in a loss of the continuity of the watercourse's habitat corridor, which causes an adverse impact on the ecological value of the watercourse and is known to inhibit the migration of some species.

Maintenance and Health and Safety Implications:

- Culverts are more difficult to inspect and maintain than open watercourses; specialist equipment is often required (CCTV surveys/jetting/suction tankers).
- Culverts often need more frequent inspections and maintenance interventions than open watercourses.
- Culverts can cause entrapment, and they are considered a confined space making any cleansing and maintenance tasks requiring human entry dangerous, difficult, and expensive.

Increased likelihood of problems in the future:

- Culverts conceal the presence of a watercourse which can lead to inappropriate land use over, or near to, the watercourse which can lead to the structural failure of the culvert, or major problems when future access for repair or replacement work is required.
- Culverts in urban areas are susceptible to pollution as a result of hidden misconnected foul drains.

Increased Erosion Risk:

- Culverts change the dynamics of flow within a watercourse; this often leads to an increase in erosion to the banks and beds of a watercourse adjacent to a culvert entrance or exit. This can result in

new repair and maintenance obligations that did not exist prior to culverting.

Due to the reasons detailed above the LLFA maintains a precautionary principle and only approves an application to culvert an ordinary watercourse if there is no reasonably practicable alternative, or if the potential negative impact of culverting would be so minor that they would not justify a more costly alternative. This means that the required consent for a proposed culvert will not be forthcoming unless alternatives to culverting have been considered, such as:

- Clear span bridges.
- The revision of site layouts to facilitate the retention of open watercourses.
- The diversion of the open watercourse without loss of its hydraulic flow characteristics.

Consent will only be granted for new culverts where evidence is provided that the above, less harmful alternatives to culverting, are unviable. In all cases and where the proposed works will result in the loss of watercourse capacity and habitat, compensatory capacity and habitat must be provided elsewhere.

5. Acceptable and Unacceptable Reasons for Culverting

Due to the potential adverse effects of culverting on both flood risk and habitat/ecology, consent for culverting will only be granted where there is a genuine requirement for the construction of a new culvert, such as:

- A need for a crossing point over a watercourse where alternative crossing arrangements, which do not involve culverting, have been shown to be unfeasible.
- Genuine health and safety reasons that cannot be overcome by other interventions that do not involve the culverting of the watercourse (such as fencing or barriers).

Consent for a new culvert will **not** be granted where there is no genuine requirement for a culvert, such as:

- To provide access where other crossing types that do not involve culverting are feasible.
- Health and safety reasons that could be mitigated via other interventions that do not involve culverting.
- To increase usable garden area or to alter garden aesthetics.
- To increase the developable area of a development site, or where culverting is proposed to facilitate the construction of structures/buildings over a watercourse.

6. Culvert Design Guidance

Where culverting is deemed unavoidable, **prior to the commencement** of the works formal written Ordinary Watercourse Consent must be obtained from the Lead Local Flood Authority. Applicants must demonstrate that all reasonable steps have been taken to minimise flood risk and mitigate environmental harm, through good design practice. Detailed design guidance is available in the "Culvert, Screen and Outfall Manual: CIRIA C786" (2019).

Points to consider before submitting an ordinary watercourse consent application to the LLFA:

- A full detailed design must accompany the formal application, including justification for the size/capacity of the culvert.
 - Hydraulic calculations are likely to be required for larger and more complex culverts.
- Culvert levels must be informed by a topographical survey that established existing watercourse silt levels, hard bed levels, and bank top levels.
 - Culverts should be installed so that both the inlet and outlet align with the hard bed level of the watercourse to maintain flow and minimise ecological harm.
- The environmental impact of the culverting will need to be considered and mitigated where harm is identified.
- To minimise adverse effects, culverts must be designed to be as short as possible to fulfil their function.

- Culverts should not be smaller than 450mm in diameter, unless evidence is provided as to why this is not possible and that the diameter that is proposed will not increase flood risk.
- Designs must not increase flood risk to property.
 - Alternative flow paths that will arise if the culvert becomes blocked should be considered and shown to be acceptable.
- Culverts must be of robust design to withstand the loadings they will be subjected to and should have an appropriate design life.
- Culverts must be designed to have a consistent cross-section throughout.
- All culverts must have appropriately designed robust headwalls at the inlet and outlet to control erosion. Headwalls should be flush with the bed and banks and be appropriate to the local conditions.
- Culvert design must comply with all relevant 'Health and Safety' legislation.
- Culverts should be designed to be easily maintainable.
- The justification for the inclusion of any trash screens must be supported by the findings of a trash screen assessment in accordance with *CIRIA C786 – Culvert, screen, and outfall manual*.
If trash screens are deemed appropriate:
 - Cranked/angled screens should be specified at upstream ends.
 - Either "no screen" should be specified on the downstream end (for better hydraulic performance, and reduced risk of debris accumulation) or a "vertical, single-plane screen aligned perpendicular to flow", if a downstream end screen is deemed necessary.
- Single large diameter culverts are preferable to multiple parallel small-diameter culverts.
- Syphon arrangements are unlikely to be acceptable due to their operational complexities and an increased risk of failure.
- Where watercourses are susceptible to siltation, consideration should be given to installing silt traps upstream of the culvert to reduce sediment build-up and blockage risk.
- Utility services must not intrude into the cross-sectional area (flow channel) of the culvert, as this can obstruct flow and complicate maintenance.
- Environmental mitigation measures must be considered as part of the design process to reduce the impact on the natural environment. Increasing the culvert diameter slightly beyond what is required for design flow, and positioning the invert level at, or

slightly below, the natural bed level of the watercourse will allow natural bed features to develop over time, supporting ecological enhancement.

- In larger culverts, ledges above the water level should be included to facilitate the movement of wildlife. Installing animal underpasses adjacent to any structure would also be acceptable.
- The structure must not obstruct fish movement. Designs should maintain continuity of flow and avoid significant vertical drops or increase in turbulence.
- Culverting proposals that also seek to deliver enhancements will be viewed more favourably, such as:
 - The removal of existing culverts that are no longer required to mitigate for the construction of new culverts.
 - Improving existing open watercourse segments subject to local constraints.
 - Creating new ponds, marshy areas, or backwater bays to increase diversity.
- The use of soft-engineering techniques or natural materials that complement the surrounding environment should be utilised where practicable, provided this does not compromise the structural integrity or design life of the structure.

7. De-culverting Guidance

The LLFA are generally supportive of the removal of existing culverts as such works usually offers a range of environmental and practical benefits, including:

- The creation of valuable watercourse habitat.
- Increased flood storage capacity.
- Reduced maintenance complexity and costs.
- Improved access for inspection and monitoring.

Ordinary Watercourse Consent is required for any de-culverting activity, as removing a culvert may alter flow dynamics and potentially increase downstream flood risk and/or erosion risk.

Depending upon the size, length, and nature of the culvert to be removed, any application to remove a culvert may require supporting evidence in the form of hydraulic modelling (to demonstrate that the

proposed works will not result in adverse flood impacts) and an ecological appraisal (to ensure any adverse impacts on biodiversity are fully understood and mitigated).

The Council actively encourages the removal of culverts where:

- Physical removal is feasible and will not result in ecological or heritage harm.
- Flood risk may be reduced and a more natural flow regime restored.
- The local environment would be significantly enhanced.

8. Enforcement

Where unconsented culverting (or de-culverting) works have been undertaken and have been found to be in contravention of the Land Drainage Act, enforcement action will be considered. The process may typically involve:

- Site investigations and attempts to resolve the matter informally.
- If informal attempts are unsuccessful in remedying the matter, a legal notice may be served.
- Failure to comply with the legal notice may result in the initiation of further legal proceedings.
- The Council may exercise their powers to carry out the necessary works and seek to recover all associated costs.

9. Sources of Further Information

- CIRIA C786 – Culvert, screen, and outfall manual
- Land Drainage Act 1991 (LDA)
- The Flood and Water Management Act 2010 (FWMA)
- Water Framework Directive 2000 (WFD)
- Water Resources Act 1991 (WRA)