

# RHONDDA CYNON TAF COUNTY BOROUGH COUNCIL

## *Ordinary Watercourse Consent Application*

### GUIDANCE NOTES

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## Ordinary Watercourse Consent – Guidance Notes

June 2012

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## Abbreviations

Abbreviations	Definition
Authority	Refers to Rhondda Cynon Taf County Borough Council acting as Lead Local Flood Authority
DEFRA	Department for Environment, Food and Rural Affairs
EA	Environment Agency
RCTCBC	Rhondda Cynon Taf CBC
FWMA	Flood & Water Management Act 2010
LDA	Land Drainage Act 1991
LLFA	Lead Local Flood Authority
SuDS	Sustainable Drainage Systems

## **1. Introduction**

- 1.1 The purpose of this document is to provide guidance on the procedures to be followed when making an application for works to Ordinary Watercourses within Rhondda Cynon Taf County Borough Council (RCTCBC), under the provisions of Section 23 of the Land Drainage Act 1991.
- 1.2 Matters that RCTCBC will take into account when considering an application are also outlined.
- 1.3 These guidelines should be read in conjunction with the application form for Ordinary Watercourse Consent, RCTCBC's Policy regarding Culverts

Note: Applicants should check with RCTCBC as to whether their proposals require planning permission under the Town and Country Planning Act 1990. Additional consents may also be required for works on third party land.

## **2. Legal Requirements**

- 2.1 Under the provisions of the Land Drainage Act 1991 (LDA) as amended by the Flood and Water Management Act 2010 (FWMA), Lead Local Flood Authorities (LLFA) now have a duty to control certain activities that might have an adverse impact on flood risk and the environment.
- 2.2 To meet the requirements of the Act, any person proposing to undertake works likely to affect the flow in an ordinary watercourse, alter an existing structure, or erect a culvert must submit details of their proposals to the Authority. Before considering a consent allowing the works to proceed, the Authority may impose reasonable conditions on any proposals, which it considers necessary to satisfy its environmental duties and to control flood risk.
- 2.3 Riparian owners, developers, and all other persons proposing to carry out such works must, therefore, obtain Ordinary Watercourse Consent from the Authority before the work commences.
- 2.4 Details of consentable / non-consentable activities are given in Appendix A of this document.

2.5 The consenting and enforcement of activities on designated Main Rivers remain the responsibility of the Environment Agency.

### 3. Definitions

3.1 *Main Rivers* are designated as such on maps held by the Department for the Environment, Food and Rural Affairs (DEFRA) and by the Environment Agency. Works in or near Main Rivers require the consent of the Environment Agency. These Guidance Notes do not cover works affecting Main Rivers and the Environment Agency should be consulted before any work is undertaken.

3.2 The term *Ordinary Watercourse*, as defined in the LDA1991 is a watercourse that does not form part of a main river. The Authority has regulatory powers in respect of *Ordinary Watercourses* within its boundaries.

3.3 The term *Watercourse*, as defined in the LDA1991 includes all 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.

## **4. Application Fees**

- 4.1 Under Section 23 (2) of the Land Drainage Act 1991, RCTCBC is authorised to charge an application fee in relation to an application for Ordinary Watercourse Consent. The fee payable is to cover the cost of examining and approving the proposals. The fee amount is currently £50.00 and is payable in respect of each separate structure forming part of the works.
- 4.2 Fees are non-refundable in the event that an application is refused.
- 4.3 The application form for Ordinary Watercourse Consent should be completed, detailing the number of structures (e.g. culverts, outfalls, crossings etc.) forming the elements of the project, as appropriate. Applicants are advised to confirm the fee payable via a pre-application discussion before submitting an application.

## **5. Obtaining Consent**

- 5.1 Applicants are advised to discuss their proposals with the Authority before submitting an application, to ensure they are aware of the principal requirements for the work envisaged.
- 5.2 Completed application forms should be submitted, with the appropriate fee, supporting drawings, calculations and other relevant documentation. Upon receipt of a full and complete application the Authority has two months in which to grant or refuse consent.
- 5.3 This time period does not start until the Authority is satisfied that the application including, where necessary, all plans, drawings, method statements and design calculations and fee, as may reasonably be required by the authority in order to properly assess the proposals, is complete in every respect. The Authority will notify the applicant on receipt of a satisfactory application.
- 5.4 3 No. copies of all drawings and documents are required, unless an electronic copy is submitted. In this respect only one copy is required.
- 5.5 The granting of Ordinary Watercourse Consent may be subject to conditions such as to the time and manner in which the works are to be carried out, forms of

construction, environmental mitigation works required, and the provisions to be made for future maintenance of the completed works.

- 5.6 A Consent granted by the Authority is given solely for the purposes of the Land Drainage Act 1991 and should not be regarded by the applicant as in any way approving the design and soundness of any proposed structure.
- 5.7 The Authority accepts no liability for the structural integrity, the future stability or the future maintenance of any works for which Consent may be given. These matters are the sole responsibility of the applicant.
- 5.8 Applicants are advised that an Ordinary Watercourse Consent does not override an adjacent landowner's rights nor does it permit interference with legally protected wildlife habitats.
- 5.9 If the Authority fails, two months after receipt of a full and complete application, to notify the applicant in writing of their determination with respect to the application, then consent is deemed to have been granted.

## **6. Nature Conservation**

- 6.1 Applicants should be aware that the Authority has a duty under the Land Drainage Act 1991 and other legislation, to conserve and enhance the natural environment. Therefore, we consider the nature conservation implications of any proposal, when determining an Ordinary Watercourse Consent Application.
- 6.2 The applicant should consider the environmental implications of all options for the works to determine the least environmentally damaging solution.
- 6.3 The Authority may also consult with the relevant external body directly on any application it receives.

## **7. General Requirements**

- 7.1 Any works undertaken are to be in strict accordance with the proposals contained in the submitted drawings for which consent is granted.

- 7.2 Precautions must be undertaken so that all existing surface water discharges flowing through the area are adequately catered for in any design proposals. This includes ensuring that there is no loss of capacity or connectivity in the system and allowing for the construction of storage lagoons/tanks as necessary to limit surface water discharges to greenfield rates, or rates specified by RCTCBC.
- 7.3 One weeks notice is to be given to the Authority prior to commencement of any works for which consent has been granted. Notice is also to be provided upon completion of works.
- 7.4 Adequate precautions to be taken to avoid pollution of the local land drainage system to the requirements of the Authority and the Environment Agency. Clear and concise guideline for pollution prevention are contained within the publication Pollution Prevention Guidelines: Works and maintenance in or near water: PPG5 published by the Environment Agency in 2007. A copy of which is available to download from the Environment Agency website.
- 7.5 Adequate precautions to be taken to avoid any adverse impacts to the nature conservation interests in the area (including Site of Special Scientific Interest areas) to the requirements of the Countryside Council for Wales.
- 7.6 Adequate provision to be made to cater for any flood situation which may occur during the construction period e.g. due to heavy rainfall/obstruction to watercourses etc.

## **8. Standards**

- 8.1 Where appropriate, applications for Ordinary Watercourse Consent shall include hydrological and hydraulic calculations consistent with the flood risk management standards applicable at the time of application.
- 8.2 The Authority recommends that the detailed hydraulic design and structural design of any works is carried out by a suitably qualified Engineer.
- 8.3 Clear and concise guidelines for the hydraulic design of culverts are contained within the publication CIRIA report C689 – Culvert Design and Operation Guide published in 2010 by the Construction Industry Research and Information Association.

- 8.4 These guidelines should be read in conjunction with RCTCBC Policy Regarding Culverts.
- 8.5 Structures must be designed so they do not cause a restriction to flood flow. They must not increase the risk of flooding or prevent maintenance of the adjacent open watercourse. All structures shall be designed and constructed to accommodate flood flows in the watercourse at the specified standard.
- 8.6 For small catchments (less than 5km<sup>2</sup>) and urban/local drainage sites this will be the predicted flows for the 100 year storm event plus an additional 20% allowance on peak rainfall intensity for climate change. For larger catchments (greater than 5km<sup>2</sup>) 20% shall be added to peak flows for climate change allowance. The design should ensure that the required hydraulic capacity is available above watercourse bed level at all times.
- 8.7 A minimum of three annual probabilities should be considered in any submitted design calculations:
- 1 in 1 year storm event
  - 1 in 30 year storm event
  - 1 in 100 year storm event
  - Including relevant allowances for climate change
- 8.9 Applicants are also advised that the Authority supports and advocates the use of sustainable drainage systems to minimise the impact of surface water run-off on the environment.
- 8.10 Under no circumstances shall the standard of protection of the proposed works be lower than the existing standard of flood protection.

## **9. Culverting**

- 9.1 The proposed culvert length should be as short as possible.
- 9.2 The shape of the culvert and the materials used for construction should be chosen to satisfy site-specific requirements in terms of channel hydraulics, strength and durability, and should be appropriate to the local environment.
- 9.3 The use of differently shaped pipes or different cross-sectional details within a culvert length should be avoided unless adequate hydraulic transitions are incorporated into the design. Such transitions are also essential where works to extend an existing culvert are proposed.
- 9.4 Appropriate inlet and outlet structures should be provided in order to ensure smooth hydraulic transition and avoid erosion. Headwall arrangements at the upstream and downstream ends of a culvert should be suitably keyed into the bed and banks of the watercourse, and should be appropriate to the local environment.
- 9.5 The responsibility for future maintenance and clearance of a culvert must be considered. The responsibility for the maintenance of a culvert lies with the land owner unless they can show otherwise.
- 9.6 Suitable access arrangements for maintenance shall be included in the design. Access chambers must be provided at each change of direction if the culverting is not straight. Sharp bends should be avoided. Manhole spacing should be in accord with the guidance in CIRIA Report 689 Culvert Design and Operation Guide (or its successor) but, due to the nature of watercourses and to facilitate maintenance, the maximum spacing between access chambers should not exceed 100 metres.

- 9.7 Inlet and outlet screens may be appropriate to prevent debris entering the culvert and causing clogging, or where there is a danger to public safety. If screens are included, they need to be sized and designed to reduce the risks of blocking, make provision for adequate cleansing and maintenance, and be sized to permit the passage of fish and other fauna (for example bats) where appropriate. Clear and concise guidelines for the design of culvert screens are contained within the publication *Trash and Security Screen Guide* (or its successor) published in 2009 by the Environment Agency.
- 9.8 Over-sized pipes or box culverts should be used wherever possible to maximise the cross-section and capacity. Allowance should be made in the hydraulic design for freeboard. The minimum recommended culvert size will vary according to the size of the watercourse but culverts smaller than a 450 mm diameter pipe or equivalent are particularly prone to blockage and their use is **not permitted**. For long culverts under embankments or similar structures, culverts with at least 1,050 mm of headroom above bed level should be used to facilitate access for inspection and maintenance.
- 9.9 In most situations it is appropriate for the inverts of culverts to be set below the existing bed level to allow for future maintenance or other works on the watercourse. It also aids the provision of a more “natural” bed to the culvert.
- 9.10 Multiple culverts should be avoided wherever possible. Multiple small culvert arrangements are prone to blockage by accumulation of waterborne debris at the inlet. RCTCBC does recognise, however, that site conditions may prevent a single-pipe or box-culvert option being practical, in which case a single-span bridge design is recommended. Where multiple culverts are unavoidable, a minimum number of culverts should be used and cutwaters should be provided between pipes at the culvert inlet.

The design should also incorporate:

- depression of the invert of one culvert to carry low flows;
- facilities to enable temporary diversion of flows to allow inspection or maintenance of each culvert;
- use of the higher “flood” culvert as a wildlife corridor.

9.11 Siphons are a source of continuous maintenance problems and should be avoided.

9.12 Culverts and outfall structures should be designed so that the exit velocities do not create erosion problems at the outlet and downstream.

9.13 On watercourses subject to severe erosion and siltation problems consideration should be given to the provision of silt traps upstream of the culvert.

9.14 Services (for example sewers, water mains etc) should not impinge into the cross-section of the culvert.

9.15 Provision of an overland flood flow route should be made to cater for situations where the capacity of the culvert is exceeded due to blockages etc.

## **10. Development proposals and building over**

10.1 RCTCBC consent is required for any culverting of a watercourse. This consent is independent of the need for planning and third party permissions. The granting of planning and third party permissions does not necessarily imply that Ordinary Watercourse Consent will be granted.

10.2 RCTCBC will normally refuse Ordinary Watercourse Consent on conservation grounds for a development which proposes a culvert where there are reasonable alternatives. Such alternative solutions might include a revised site layout or an ecologically acceptable diversion of an open watercourse.

10.3 Buildings should not be sited over the top of new or existing culverts. The culvert may, in the future, need to be repaired, replaced or upgraded if conditions in the catchment change. There is also the need to maintain an overland flow route if the culvert is blocked or its capacity exceeded.

## **11. Environmental Considerations**

11.1 Each application for consent is considered on its own merits. Mitigation works to reduce the impact on the environment will be taken into account by RCTCBC when determining a consent application for culverting.

11.2 Advice on environmental considerations is available from RCTCBC staff.

11.3 The following options for environmental mitigation measures may be appropriate:

- Make the culvert slightly larger than needed to accommodate the design flow and then position the invert of the culvert below the natural bed of the watercourse, to enable some “natural” bed features to form. Where flow conditions are such that the natural stream has a gravel bed, the lowered invert could be dressed with appropriately sized gravel. Actively introducing gravel will speed up the process of substrate replenishment, although velocities may need to be controlled to prevent washouts.

- Provide ledges running through the culvert (approximately 500 mm wide and 300 mm above normal water level) to allow for the passage of mammals. These should link to the banks upstream and downstream of the culvert (Note: This will only be applicable for larger culverts).
- Make provision for appropriately located mammal underpasses close to the culvert. Usually, stock-proof fencing will be required to guide wildlife into the underpass. This should be integral to any scheme irrespective of whether ledges are provided within the culvert. An alternative design utilising bridges should be considered, particularly where a road crosses a watercourse valley.
- Ensure water velocities are not too fast to prevent the movement of the resident or migratory fish populations. The height of the invert should not pose an obstruction to fish movement. Baffles or other features providing shelter for fish as they pass upstream through the culvert may be incorporated into the design of a culvert base. (Note: Further information on this should be sought from RCTCBC).
- Provide structures to encourage bat roosting and bird nesting as appropriate (Note: This applies to larger culverts only. Further guidance is available from RCTCBC).
- Propose suitable environmental enhancements, for example opening up a length of previously culverted watercourse elsewhere on the site, enhancing other lengths of the watercourse, creation of a pond/marshy area, scrub/hedge planting (this does not compensate for the loss of aquatic habitats).

- Ensure watercourses are not canalised, upstream or downstream of culverts. Artificial bank reinforcement should be avoided wherever possible.
- Construct headwalls and wingwalls in materials and style which are in keeping with the character of the locality and respect the landscape setting.

## **12. Right of Appeal**

- 12.1 If an applicant believes that Ordinary Watercourse Consent has been unreasonably withheld, or that the conditions imposed are unreasonable, then the applicant has a right of appeal.

## **13. Failure to Obtain Ordinary Watercourse Consent**

- 13.1 The failure to obtain Ordinary Watercourse Consent prior to carrying out the works is an offence. Under Section 24 of the Land Drainage Act 1991, if works are executed in contravention of Section 23, or without first obtaining a formal Consent, the Authority has the power to serve a Notice requiring abatement of the nuisance within a specified time.
- 13.2 Under Section 24 of the Act, failure to abide by such a notice can result in the Authority carrying out the necessary remedial work and seeking to recover costs.

## **14. Other Consents and Permissions**

- 14.1 The issue of an Ordinary Watercourse Consent by the Authority does not absolve a person proposing to execute works from the need to obtain such other licences, consents or permissions which may be required by law.

## **15. Further Information**

For further information and guidance in individual cases please contact:

**Rhondda Cynon Taf County Borough Council**  
**Land Reclamation & Engineering**  
**Highways, Transportation & Strategic Projects**  
**Sardis House**  
**Sardis Road**  
**Pontypridd**  
**CF37 1DU**

Telephone: **01443 494809**

Email: **FRM@rctcbc.gov.uk**

## **APPENDIX A**

## Cross sections of typical non-consentable / consentable activities

The list of following illustrations are not exhaustive. It is advisable to contact the authority (see section 12) prior to submission of an application for Ordinary Watercourse Consent to discuss if consent is required.

### Non-Consentable Activities



**Bank Protection Works** – May be subject to a Temporary Works consent application under Section 23 1(a) of the Land Drainage Act.



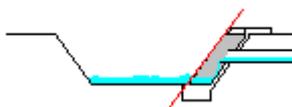
**Pipe Crossing (above bank)** - If considered that the proposed arrangement does not interfere with flow.



**Pipe Crossing (below bed)** – This does not interfere with flow if directional drilling is used. Temporary works consent applications may be required if open excavation methods are proposed to install the pipe.



**Protruding Pipe Outfall** – This is not normally considered to act as an obstruction. It is advisable to ensure the pipe is closely aligned with the existing bank/proposed structure. This is a matter for discussion and prior agreement with the Authority.



**Outfall within Bank profile** – This usually does not interfere with flow if the structure is constructed without physically entering the channel. May be subject to a Temporary Works consent application under Section 23 1(a) of the Land Drainage Act.

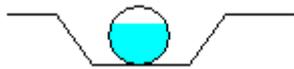


**Bridge (abutments protruding but not reducing flow area/width)** – This is considered not to interfere with flow.



**Clear span bridge** - This is considered not to interfere with flow. It is recommended that the proposed soffit (dependent on depth of channel) is at least 300mm above the bank tops either side of the watercourse or a minimum of 600mm above the design flood level (if known).

**Consentable Activities**



**Pipe Culvert (including extension and removal of)** – Required under Section 23 1(b) of the Land Drainage Act. Important Note: Only permitted for short lengths as possible for access purposes. Please refer to RCTCBC Policy Regarding Culverts.



**Oversized Box Culvert (including extension and removal of)** - Required under Section 23 1(b) of the Land Drainage Act. Important Note: Only permitted for short lengths as possible for access purposes. Please refer to RCTCBC Policy Regarding Culverts.



**Trash Screens** – Required under Section 1(c) of the Land Drainage Act as it is an alteration to a culvert and has the potential to obstruct flow.



**Pipe Crossing (in channel)** – Required under Section 23 1(a) of the Land Drainage Act. May also be subject to a Temporary Works consent application.



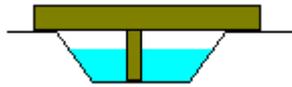
**Weir/Dam or impoundment or temporary works e.g. cofferdams, that obstruct flow/reduce channel width - Required** under Section 23 1(a) of the Land Drainage Act.



**Bridge (where soffit level is below bank top level)** - Required under Section 23 1(a) if it has the potential to affect flow. Best practice should ensure that proposed soffit levels (dependent on overall depth of channel) is at least 300mm above the bank tops either side of the watercourse. This may then exclude the requirement for a formal consent application.



**Bridge (Abutments restricting flow) or Flume** – Required under Section 23 1(b) of the Land Drainage Act as this could be considered to perform like a culvert.



**Bridge with supports e.g. piers, in channel** – Considered to be an obstruction in a similar way to the Bridge Abutments.