

ANGUS COUNCIL

INFRASTRUCTURE SERVICES COMMITTEE

25 AUGUST 2009

**A935/4 ARRAT BRIDGE - FUNDING IMPLICATIONS AND OPTIONS FOR LONG TERM FUTURE MAINTENANCE**

**REPORT BY THE DIRECTOR OF INFRASTRUCTURE SERVICES**

**ABSTRACT**

This report updates the Committee following an investigation of the maintenance and repair options for Arrat Bridge, one of three road-over-rail bridges on the railway line between Brechin and Bridge of Dun. It summarises two options and recommends one of them for implementation.

**1 RECOMMENDATION**

1.1 It is recommended that the Committee agree:-

- (i) to adopt Option 1, track drainage and ongoing maintenance as the best course of action to repair and maintain Arrat Bridge;
- (ii) to instruct the Head of Roads to proceed with the project as part of the Council's bridges maintenance programme, commencing in financial year 2009/10 which can be contained in the Roads Capital budget for Bridge Repairs/Strengthening.

**2 INTRODUCTION**

2.1 The Committee was informed in August 2005 (Caledonian Railways – Maintenance Liabilities Report No 989/05) of a problem regarding the maintenance and repair of three road-over-rail bridges on the private railway line between Brechin and Bridge of Dun leased to the Caledonian Railway Company.

2.2 At that time the Committee's instructions were:-

- (i) the terms of the lease were amended to relieve the Caledonian Railway Company of its obligations to maintain three bridges which carry public roads over the private railway;
- (ii) the Director of Roads, in conjunction with the Economic Development Manager, was instructed to undertake studies to determine the best options for the future of these bridges;
- (iii) the Director of Roads, the Economic Development Manager and the Acting Director of Finance were instructed to bring forward further reports on the funding implications and options for the long term future maintenance of these three bridges.

2.3 This report sets out the implications and options for the long term future maintenance of one of these bridges, Arrat Bridge, which is located 4.5 km southeast of Brechin and carries the A935 over the Caledonian Railway Line (as shown on the attached plans in Appendix A of this report).

**3 DETAILS**

3.1 The Arrat Bridge probably dates from circa. 1848 when the line was opened.

3.2 This bridge is considered to be capable of carrying the 40/44 tonne legal load for the foreseeable future. A feasibility study into the potential engineering solutions for the bridge

was completed in 2008. The feasibility report noted defects relating to weathering to the masonry to the northeast spandrel wall and wingwall, minor mortar loss to the abutments, corrosion to the corrugated steel deck shuttering, corrosion to the parapet railings, seepage of water to the deck, break up of the surfacing over the bridge and standing water around the track under the bridge.

3.3 There are two options for the long-term future of this bridge:

**Option 1: Provide track drainage and ongoing maintenance**

This solution involves draining the track below the bridge and continuing with regular inspections and maintenance. The defects noted above will not affect the long-term load-carrying capacity of the bridge, provided they are put right as part of regular maintenance. The water accumulating below the bridge will require to be drained in the short term. The remaining defects can be rectified as part of normal maintenance of the bridge and carriageway.

**Advantages:**

- Bridge life preserved by normal maintenance
- Lower long-term cost than Option 2

**Disadvantages:**

- Higher short-term costs than Option 2 due to drainage works
- Present level of maintenance costs continue for life of bridge

**Option 2: Do nothing until comprehensive repair required**

This solution involves doing nothing until the bridge deteriorates to the extent that comprehensive refurbishment is required. Inspection would continue in accordance with current inspection policy.

**Advantages:**

- Lower short term costs than Option 1

**Disadvantages:**

- Long-term deterioration would result in expensive repair work
- Higher long-term costs than Option 1
- Risk to public safety if the bridge deteriorates significantly

**4 FINANCIAL IMPLICATIONS**

4.1 A comparative 120 life cost study has been performed and the results are summarised in the table below.

Cost item	OPTION 1	OPTION 2
Inspection	£778,000	£778,000
Drain track	£5,000	-
Maintenance	£1,012,000	£118,000
Full refurbishment (Year 70)	-	£1,739,000
Total	£1,795,000	£2,635,000

4.2 Option 1 has the lowest long-term cost of the two options considered. Option 2 offers lower immediate costs but significantly higher long-term costs. The initial costs of Option 1 are £5,000 to provide the drain track. Option 1 is therefore recommended.

4.3 If members approve Option 1, the costs of installing the drain can be contained within the Roads Capital allocation for Bridge Repairs for 2009/10.

## 5 HUMAN RIGHTS IMPLICATIONS

5.1 There are no human rights implications arising from the proposals in this report.

## 6 EQUALITIES IMPLICATIONS

6.1 The issues dealt with in this Report have been the subject of consideration from an equalities perspective (as required by legislation). An [equalities impact assessment](#) is not required.

## 7 SINGLE OUTCOME AGREEMENT

7.1 This report contributes to the following local outcome(s) contained within the Single Outcome Agreement for Angus.

- Communities in Angus are safe, secure and vibrant.

## 8 CONSULTATION

8.1 The Chief Executive, Director of Corporate Services, Head of Finance, and Head of Law and Administration have been consulted in the preparation of this report.

8.2 The Caledonian Railway Company has been involved in discussions which precipitated this report.

## 9 CONCLUSION

9.1 Option 1 appears to be the best course of action, offering the optimum balance of cost and safety advantages.

**ERIC S LOWSON  
DIRECTOR OF INFRASTRUCTURE SERVICES**

### NOTE:

The following background papers, as defined by Section 50D of the Local Government (Scotland) Act 1973 (other than any containing confidential or exempt information), were relied on to any material extent in preparing this Report:-

Report No 989/05 – Caledonian Railways – Maintenance Liabilities

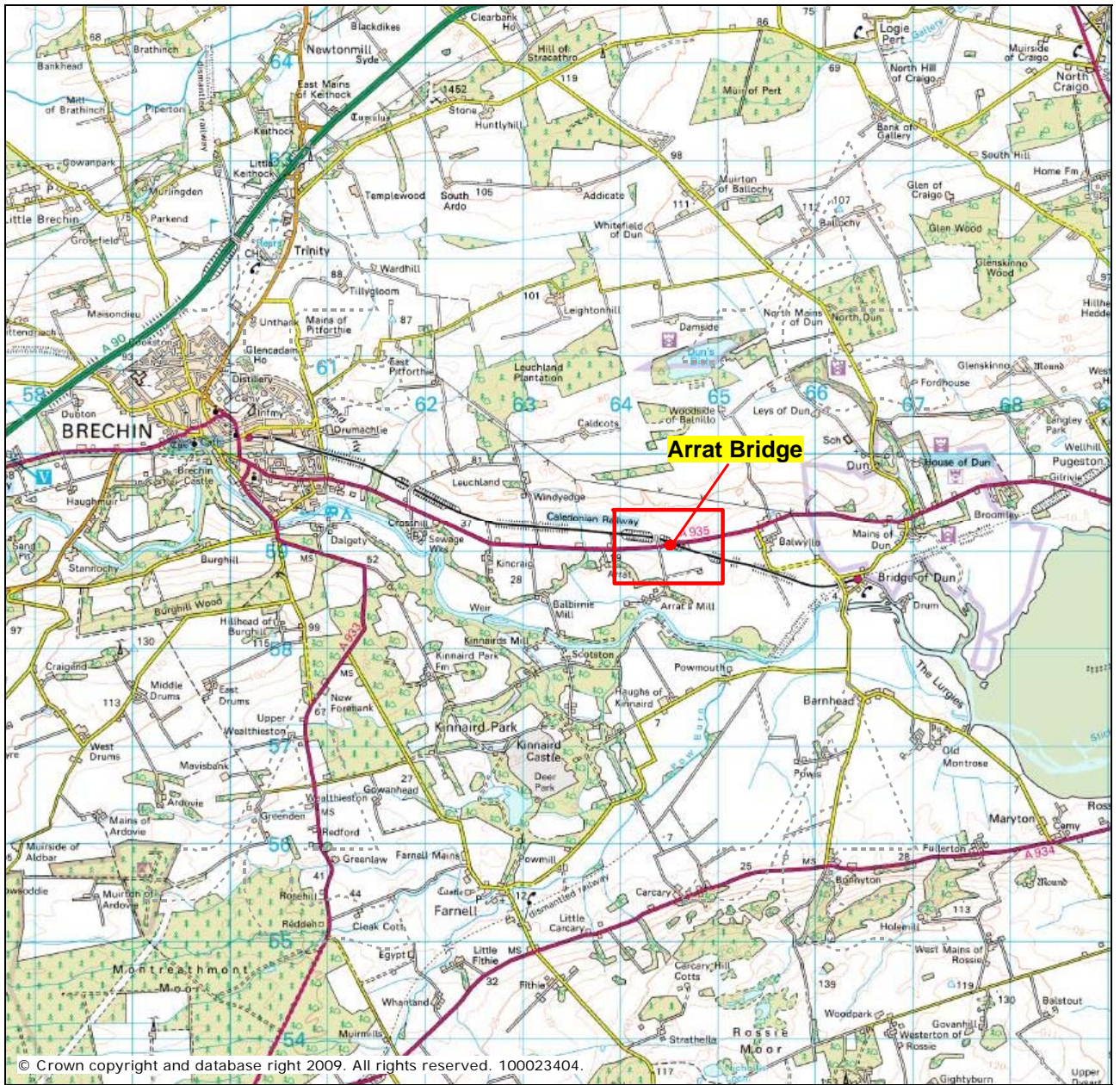
Roads/JG/SP

Reports/arrat bridge

**Appendix A**

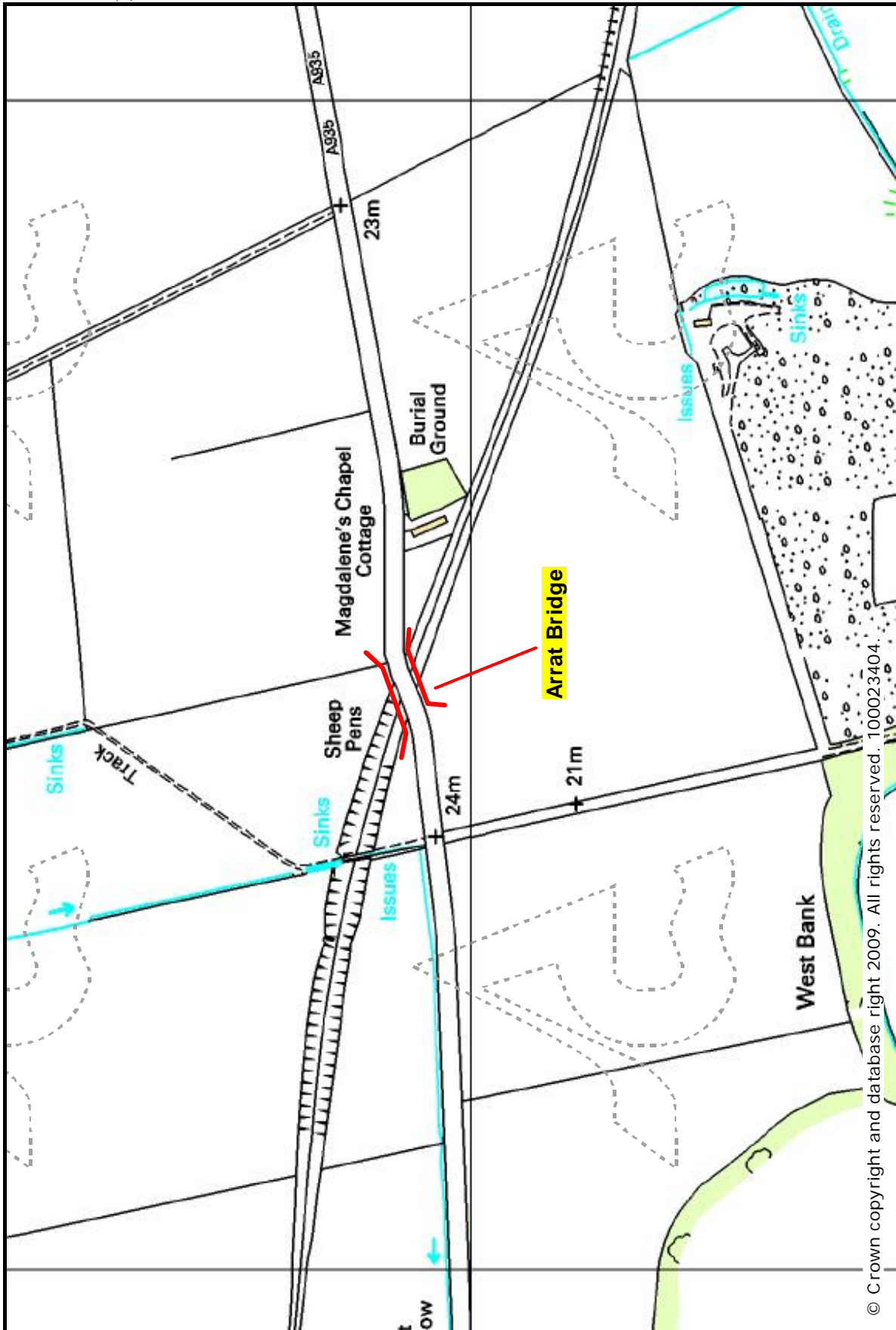
**Arrat Bridge**

(i) Location Plan



Not to scale

(ii) Site Plan



Not to scale