



**REPORT TO: ECONOMIC DEVELOPMENT AND INFRASTRUCTURE
SERVICES COMMITTEE ON 17 MARCH 2020**

SUBJECT: BRIDGES CAPITAL AND REVENUE BUDGET REPORT

**BY: DEPUTE CHIEF EXECUTIVE (ECONOMY, ENVIRONMENT AND
FINANCE)**

1. REASON FOR REPORT

1.1 To ask Committee to agree the proposed schedule of bridge Revenue and Capital maintenance works to be undertaken for 2020/21.

1.2 This report is submitted to Committee in terms of Section III (A) (2) of the Council's Scheme of Administration relating to the consideration of Capital and Revenue Budgets and long term financial plans.

2. RECOMMENDATION

2.1 **It is recommended that Committee agree the proposed schedules of road bridge Revenue and Capital maintenance works and non-network bridge Capital maintenance works to be undertaken for 2020/21.**

3. BACKGROUND

3.1 Under the Roads (Scotland) Act 1984, Moray Council has a duty to manage and maintain the safety of the road network in Moray. Moray Council's road network includes 376 bridges and 160 retaining walls, with a replacement value of £115 million.

Revenue Schemes Progress in 2019/20

3.2 Planned maintenance work was undertaken on one bridge during 2019/20. This work included repairs to a damaged concrete deck. There were also minor repairs to replace damaged components. Other planned schemes were deferred to accommodate reactive works. The deferred schemes have been included in the programme of work for 2020/21.

3.4 Reactive maintenance was undertaken on six bridges during 2019/20. This work was predominantly repairs to vehicle collision damage at five bridges. Four of these were hit-and-run incidents and the Council has had to fund the repairs, as the cost could not be recovered from the driver. Bridge of Dunnyduff at Keith was by-passed with a temporary bridge as the existing

structure was assessed as unsafe. The bridge provides sole access to homes, farms and a water treatment works, so a temporary bridge is required to maintain access, until funding for a permanent bridge is available. An allowance to construct a permanent bridge at Dunnyduff is included in the capital plan for 2028/29.

- 3.5 At the time of writing this report, it is anticipated that there will be less than 5% underspend on the £130,000 Road Bridges Revenue budget for 2019/20, as detailed in **APPENDIX 1**.

Bridges Revenue Programme for 2020/21

- 3.6 The maintenance and replacement programme for the bridge stock is based on scheduled inspection reports. These are entered into the asset management database where a bridge condition indicator (BCI) is automatically generated for each bridge. A list of the stock is obtained giving the condition (very good, good, fair, poor, very poor) of each bridge. The condition of Moray Council's bridge stock is provided in **APPENDIX 2**. Resources are targeted at the lower (poor, very poor) end of the scale, also taking into account the criticality or importance of the route carried. A bridge is considered to be of critical importance if it carries more than 7000 vehicles per day or provides sole access to property. If an inspection report indicates that maintenance works would significantly reduce future costs, engineering judgement is used to assess if this work should be prioritised over bridges with a lower BCI.
- 3.7 The bridges revenue budget for 2020/21 has been reduced from £130,000 to £105,000 as agreed by Moray Council on 12 February 2020 (paragraph 10 of the draft minute refers). The programme of work that will be undertaken during this year is provided in **APPENDIX 3**. This work includes but is not limited to masonry repairs, vegetation management and principle inspections. No allowance has been included for unplanned works that are identified through inspections, or as a result of accidental damage. In the event of collision damage, an investigation into the cause and person responsible is undertaken, and where possible the cost of repair is recovered. However, as collisions are not always reported it is often not possible to identify the person responsible. In these cases the site will be made safe (e.g. the damaged area barriered off or if necessary the road closed). Repairs will be considered for inclusion in the Revenue or Capital programme in a subsequent year. If repairs are very urgent, e.g. a sole access is severed, the position will be reviewed.

Capital Schemes Progress in 2019/20

- 3.8 Planned Capital works were undertaken to seven Vehicle Restraint Systems and two Bridge refurbishment schemes. A more detailed break-down of the projects is provided in **APPENDIX 4**. These schemes have been designed and developed during the early part of the current year, with works starting on site in August 2019, and anticipated to be complete in March 2020.
- 3.9 The project to install a weight limit and traffic signals at B9103 Arthur's Bridge was completed in February 2020.

- 3.10 Phase 1 of the project to refurbish A941 New Craigellachie Bridge is underway. This scheme has a £1,850,000 budget in the current year of the Capital Plan. The project is due to complete on site in March 2020.

Capital Schemes Programme for 2020/21

- 3.11 Refurbishment and major works for the bridge stock are based on scheduled inspection reports. Where significant maintenance or refurbishment works, which will extend the life of the structure are required, funding for this work is sourced from the Council's Capital budget.
- 3.12 The bridges Capital Projects for 2020/21 include strengthening and refurbishment of Bantrach Bridge and MacDowall Bridge and the replacement of Tomliath Bridge with a total value of £952,000. These three bridges have been prioritised for works this year as they are all significantly understrength and provide the sole access to a number of homes and businesses.
- 3.13 The budget for Vehicle Restraint System (VRS) is £107,000 plus approximately £38,625 intended to be carried forward from the current year. The schemes in this rolling programme of VRS replacement are prioritised on the condition of the existing VRS and the importance and traffic flow of the route they protect.
- 3.14 The budget for Multi-Storey Car Park maintenance is £114,000 per year. In 2019/20 a scheme was developed to replace the waterproofing at Batchen Lane Car Park, which will utilise £215,000 rolled forward from 2019/20, plus the 2020/21 budget.
- 3.15 The combined budget for all three work streams is £1,426,625.
A more detailed break-down of the projects is provided in **APPENDIX 5**.

Non-Network Bridges Capital Programme for 2020/21

- 3.16 Maintenance of the Council's 107 non network bridges, which consist of footbridges and some small vehicular bridges, is funded through a capital allocation of £50,000 per year. £80,000 is to be rolled forward from the past two years and will contribute to the scheme to replace the life-expired Findochty Caravan Park Footbridge. The design has been developed during 2019/20, and is to be tendered in March 2020 for delivery in summer 2020. Elements of Sanquhar Footbridge damaged during Storm Ciara in February 2020 are to be replaced during summer 2020. A detailed break-down of the projects is provided in **APPENDIX 6**.

4. SUMMARY OF IMPLICATIONS

(a) Moray 2026: A Plan for the Future and Moray Corporate Plan 2017 – 2022

The maintenance of the road infrastructure aligns with the Council's policy to provide Sustainable Economic Development (Priority 1).

(b) Policy and Legal

This work is undertaken in accordance with the Council's duty to maintain a safe road network, under the Roads (Scotland) Act 1984.

(c) Financial implications

The proposed capital and revenue works as estimated are to be contained within the Council's budget for 2020/21.

(d) Risk Implications

There are no risk implications associated with this report.

(e) Staffing Implications

There are no staffing implications associated with this report.

(f) Property

There are no property implications associated with this report.

(g) Equalities

There are no known equalities implications arising from this report.

(h) Consultations

The Depute Chief Executive (Economy, Environment and Finance), Head of Environmental and Commercial Services, Legal Services Manager, P Connor, Principal Accountant, Development and Operations Manager for Harbours, L Rowan, Committee Services Officer and the Equal Opportunities Officer have been consulted and comments have been taken into account.

5. CONCLUSION

- 5.1 The Council has a duty under the Roads (Scotland) Act 1984 to maintain a safe road network. Maintenance and repair of the infrastructure is part of the Council's Corporate Plan 2017 – 2022 to provide sustainable economic development. The proposed allocations for 2020/21 Bridges Revenue and Capital Budget takes account of both, based as far as practicable, on a risk-based plan-led approach.**

Author of Report:	Daniel Preston Senior Engineer (Bridges)
Background Papers:	
Ref:	SCOTS Roads Asset Management (Bridges) Spreadsheet ST6 Structures Cost Projection V3.3 2016

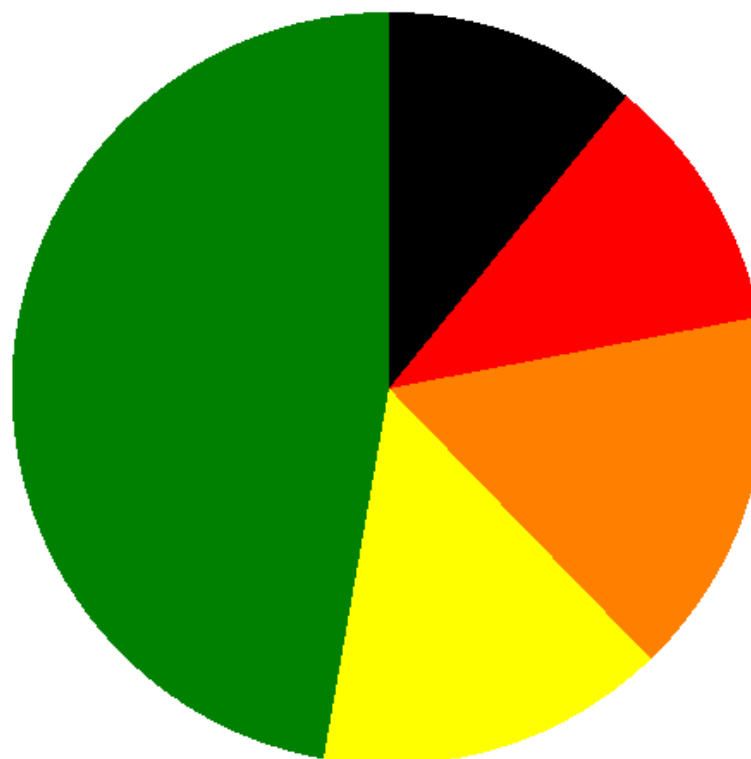
APPENDIX 1 – REVENUE WORK PROGRAMME FOR 2019/20






Revenue Works 2019/20			
Bridge	Proposed Works	Estimated Cost	Comments
Bantrach Bridge	Multiple issues, review required	£5,000	Reactive Road Traffic Collision make safe completed. Review has increased the scope, now in Capital Plan. £15,000 allocated to Drum Bridge.
Auchriachan	Extensive investigations and structural assessment required.	Nil	Investigation complete. Assessment in Mar '20, staff time, so no external costs. £5,000 reallocated to Reactive Repairs.
Doual Bridge	Repair pedestrian parapets, install abutment scour protection	Nil	Deferred, £5,000 allocated to Bridge of Dunnyduff
Craibstone	Concrete repairs to arch barrel and abutments, plus kerbing and drainage.	Nil	Deferred, £20,000 reallocated to Reactive Repairs.
Aultbeg	Concrete repairs to arch barrel	Nil	Deferred, £4,000 reallocated to Reactive Repairs.
Cairnfield	Concrete repairs, pick and pointing and waterproofing	Nil	Deferred, £12,000 reallocated to Reactive Repairs.
Drum Bridge	Concrete repairs to bridge soffit.	£24,000	Cost up from £4,000 due to greater scope. Delivery Mar 2020.
Bridge of Dunnyduff	Temporary bridge installed to allow diversion over failed structure.	£37,500	Reactive repair
Vegetation Clearance	Clear/cutback/remove vegetation to allow inspections at Various Bridges.	Nil	Not required this year. reallocated to Reactive Repairs.
Sweeping Bridges	Clear/cutback/remove detritus to allow inspections at Various Bridges	£1,000	Less than anticipated required this year. £1,500 reallocated to Reactive Repairs.
Principal Inspections	Carry out Principal Inspections at Various Bridges	£17,500	Savings due to no access hire required. £10,000 reallocated to Reactive Repairs.
General Repairs and Maintenance	Reactive works	£45,000	Greater number and scope than anticipated, cost increased from £25,000. Delivery Mar 2020.
	Total	£130,000	

APPENDIX 2 **WDM® Structures Management System**
Critical Condition Indicator Report Summary
386 Bridges included in this summary as at 10/02/2020



Current Condition of Bridges Stock:



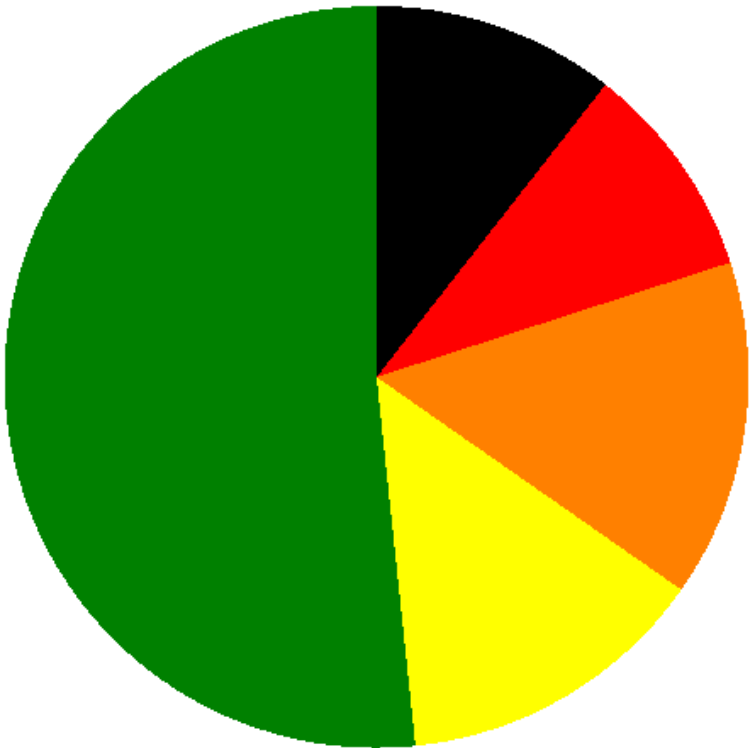
	Very Poor - < 40		Poor - 64 to 40		Fair - 79 to 65		Good - 89 to 80		Excellent - 100 to 90
10.88%		11.14%		15.80%		15.03%		47.15%	






WDM® Structures Management System
Critical Condition Indicator Report Summary

383 Bridges included in this summary as at 10/02/2019



Condition of Bridges Stock 1 year ago:



	Very Poor - < 40		Poor - 64 to 40		Fair - 79 to 65		Good - 89 to 80		Excellent - 100 to 90
10.44%		9.66%		14.62%		13.58%		51.70%	

APPENDIX 3 – REVENUE WORK PROGRAMME FOR 2020/21

Revenue Works 2020/21		
Bridge	Proposed Works	Estimated Cost
Principal Inspections	Carry out Principal Inspections at Various Bridges (backlog from 2019-20).	£40,000
Maintenance for Inspections	Sweeping and vegetation clearance.	£5,000
Aultbeg Bridge	Devegetate, reinstate fill at headwall and pressure-point cracks to concrete arch barrel.	£5,000
Cairnfield Bridge	Rebuild both parapets (crumbling masonry). Repair localised scour damage.	£25,000
Craibstone Bridge	Scour damage and reinstate superstructure drainage	£20,000
Doual Bridge	Install abutment scour protection.	£10,000
	Total	£105,000

APPENDIX 4 – CAPITAL WORKS IN 2019/20

Capital Works 2019/20			
Bridge / Location	Description of Works		Budget Cost
Part-completed 2018/19 schemes	Vehicle Restraint Barriers	Schemes on site at start of year	From 2018/9 £65,300
Salterhill Bridge	Vehicle Restraint Barriers	Carry-over scheme from 2018/19	From 2018/9 £18,835
Bridge of Kings Ford	Vehicle Restraint Barriers	Carry-over scheme from 2018/19	From 2018/9 £26,040
	18/19 Committed Schemes Sub-Total		£110,175
VRS Reactive Repairs	Repairs After Crash Damage	6 Sites - Vehicle Restraint Barriers	£14,335
Beechwood House B9103	Vehicle Restraint Barriers	Replace Life-Expired System	£16,230
A98 Inchgower Distillery	Vehicle Restraint Barriers	Replace / Upgrade Timber Post System	£25,000
A98 Cullen East	Vehicle Restraint Barriers	Replace / Upgrade Timber Post System	£19,500
A941 Craigellachie by Muirton	Vehicle Restraint Barriers	Replace / Upgrade Timber Post System	£26,000
	Planned 2019/20 Schemes Sub-Total		£101,065
Road Safety	VRS Schemes Sub-Total		£211,240
Car Parks	Multi-storey car parks waterproofing and movement joints		£ 13,000
Arthur's Bridge	Narrowing to single lane, install traffic signals and weight limit		£ 63,060
Glenlivet Bridge	Waterproofing and surfacing replacement		£181,700
A941 New Craigellachie Bridge	Road and footway surfacing, kerbs and movement joints		£1,246,330
	Sub-Total		£1,504,090
	Total		£1,715,330

APPENDIX 5 – CAPITAL WORKS IN 2020/21

Capital Works 2020/21		
Bridge / Location	Decription of Works	Budget Cost
VRS Reactive Repairs	Repairs After Crash Damage To be delivered as they arise	£60,000
VRS Wooden Post Replacement	Replace / Upgrade Timber Post Systems – to be prioritised	£85,625
Road Safety Barriers (VRS)	VRS Schemes Sub-Total	£145,625
Car Parks – Batchen Lane	Multi-storey car parks waterproofing and movement joints Batchen Lane Car Park Waterproofing and Movement Joints	£329,000
Tomliath Bridge	Strengthen scoured abutments and replace life-expired bridge deck	£160,000
Bantrach Bridge	Rebuild parapets, repoint throughout, replace arch fill, install a waterproofing system, scour protection, realign approaches, reinstate	£336,000
MacDowall Bridge	Rebuild parapets, repoint throughout, replace arch fill, install a waterproofing system, realign approaches, reinstate	£360,000
Cloddach Bridge	Ammend 7.5T limit to 3.0T weight + 2.0m width limits Build physical narrowings on both approaches to prevent abuse of limits	£ 48,000
Cappies Hill Bridge	7.5T weight limit required, including signs and a signed diversion route	£ 48,000
	Sub-Total	£952,000
	Total	£1,426,625

APPENDIX 6a – NON-NETWORK BRIDGES CAPITAL WORKS IN 2019/20

Capital Works 2019/20 (£40,000 allocated in Capital Plan 2019/20)		
Bridge / Location	Decription of Works	Budget Cost
Findochty Caravan Park F'bridge	Replacement of life-expired bridge deck and approach rails	£ 8,000
Inspections	General Inspection Programme (rolling 2 year programme started)	£ 4,000
Non-Network Bridges	Total	£ 12,000

APPENDIX 6b – NON-NETWORK BRIDGES CAPITAL WORKS IN 2020/21

Capital Works 2020/21 (£50,000 allocated in Capital Plan 2019/20)		
Bridge / Location	Decription of Works	Budget Cost
Findochty Caravan Park F'bridge	Replacement of life-expired bridge deck and approach rails	£90,000
Sanquahar Loch Upper F'bridge	Major repairs or replacement - damage from storm Ciara	£10,000
Inspections and Assessments	General Inspection Programme (rolling 2 year programme) Principal Inspection and Assessments of vehicular bridges	£30,000
Non-Network Bridges	Total	£130,000