

Executive Summary

Scottish Canals is the second largest owner of cultural heritage assets in Scotland. The Corporate Plan recognises that maintaining the infrastructure assets in a good condition maximises public value from inclusive regeneration, business development, employment creation, sustainable transport, carbon reduction, sustainable water management, recreation and health. However, by their historic nature the assets are in a state of decline which is only exacerbated by climate change and increased usage. Like all other public asset based organisations, a backlog of under investment in asset maintenance and replacement has built up over a considerable number of years and therefore, asset failure is an ever present and increasing risk which could have a significant impact, not only public safety, but also local and regional economies.

In recognition of these facts Scottish Canals (SC) has been refining and professionalising its approach to Asset Management. In June 2018 Scottish Canals launched its Asset Management Strategy 2018-2030 (AMS) and over the last year has made substantial progress in establishing the approach internally, within the business, and externally with Scottish Government and numerous stakeholders as well as driving wider awareness across the general public.

Within the AMS framework SC stated it would deliver a yearly Asset Management Plan (AMP). This plan sets out to review the previous year's performance and both prioritises and aligns the available resources, defining the life cycle activities and programmes from asset inspections, planned preventative maintenance (PPM), to corrective maintenance and more substantial renewals and replacements over a 3 year period. This plan will:

- Prioritise investment in line with the strategic hierarchy (Figure 1) and endeavour to deliver the best possible service with available resource.
- Evolve the approach to Asset Management, maturing and innovating to implement good practice in asset management as well as learn and share from other infrastructure asset owners.
- Measure and monitor the performance of the assets and the AM process and report in a manner that is beneficial to the business.
- Provides feedback for future planning and implementation to achieve continual improvement in asset performance.
- Identify risks that arise from the uncertainty of funding levels from year to year in order to ensure the canal network remains safe for local communities, visitors and Scottish Canals' staff.



Figure 1 Prioritisation Hierarchy

AMP 2018/19 Review

2018/19 saw a significant increase in governmental funding over the previous 6 years due to the failure of life expired assets, Figure 2. This welcome investment allowed for actions to be brought into 2018/19 from the forward plans. These works were politically expedient, to maintain public value, support revenue generation and reinstate sea-to-sea transit on the Forth & Clyde Canal.

However, they resulted in significant changes to the strategic work plan. This situation was compounded by 60 % of the capital investment arriving late in the year, the scale of the engineering challenges, the significant internal and external resources required as well as the significant reduction in available revenue, Table 1.

As a result of these significant changes, some lower risk-expenditure and investment projects allocated to 2018/19 were delayed until 2019/20. This has resulted in a continued growth of the backlog and further degradation of overall asset health, maintaining the operability of the canal but increasing the risk of asset failures in future years.

2018/19	Capital Investment	Revenue Investment
Planned	£3,500,000	£657,000
Actual	£10,450,000	£335,000
Variance	+200 %	-50 %

Table 1 Planned versus Actual Budgets 2018/19

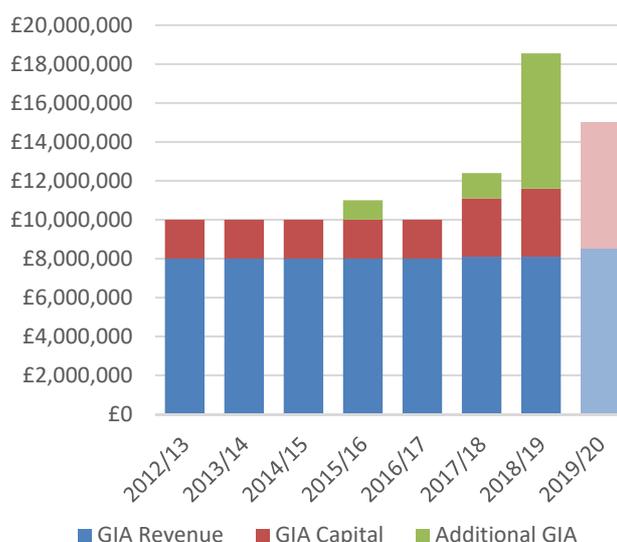


Figure 2 Grant in Aid to Scottish Canals 2012 to 2018

2018/19 Successes:

- High Risk assets on the network reduced from 187 to 174 (7 % decrease)
- 22 major capital and 2 major revenue projects completed.
- 25 asset failures occurred of which 17 were successfully resolved and the other 8 are being actively worked on during 2019/20.
- All Reservoir Surveillance, Length and Annual Inspections were undertaken during 2018/19.
- Asset Investment Tool a systematic and consistent process for allocating resources on a needs basis driven by risk combined with consideration of added benefits and a professional assessment of Must, Should and Could is being refined and will be fully deployed in 2019/20
- Audit Glasgow undertook a review of Asset Management in Q4 of 2018/19 and findings have been incorporated into AMP 2019/20

2018/19 Challenges:

- Continued growth of the backlog and continued degradation of overall asset health increased risk of asset failures in future years.
- Due to the introduction of increased Principal Inspection frequency for enhanced control of High Risk Assets only 80 % of PIs were achieved. This will be resolved early in 2019/20.
- Significant investment delivered on many of the highest risk assets and those in the poorest condition, however, overall we have identified slight decline in our B/C category asset as a result of insufficient revenue investment.

AMP 2019/20

The asset management plans for 2019-22 continue to focus on maturing our approach to asset management, prioritise expenditure and investment, delivering against statutory and legislative requirements, and where possible maintain the levels of service set out in the AMS. Where resources allow we will manage the backlog of work, deploy renewal investments and extend the life of existing assets with prioritised maintenance regimes. The risks associated with the plan and associated activities are recorded within the Infrastructure Risk Register and significant changes are promoted to the Corporate Risk Register.

Scottish Government have confirmed an increased capital grant allocation for 2019/20 of £6,500,000 Grant-in-Aid (GIA) capital. Business Planning has made £1,257,000 available from the core £8,500,000 revenue GIA.

2019/20 Capital Allocation:

• Continued programme commitments from 2018/19	£800,000
• Asset Management Strategy Projects	£2,500,000
• Operational project commitments including Lock 16 hub	£700,000
• Stage 2 of Fort Augustus & Cullochry Lock replacements	£2,500,000

2019/20 Revenue Expenditure:

• Asset Inspections	£171,000
• Dredging	£20,000
• Planned preventative maintenance	£100,000
• Corrective maintenance (minor works):	£524,000
• Corrective maintenance (major works):	£442,000

The Asset Need

Forward plan scenarios have identified that the budget required to maintain current asset condition levels now and in the future is estimated at £9,000,000 per annum capital investment and £2,500,000 per annum revenue expenditure. This would spread programmes of renewal and prioritised maintenance over a 10 year period gradually moving our service levels from 'Operational with Risk' and potentially 'Restricted Operation' to 'Steady State'.

In a steady state condition the canal system would be able to fulfil all of the following:

- Ensure the safety of communities, staff and visitors;
- Ensure the canals remained operable with sustained income sources;
- Maintain the Falkirk Wheel to secure the main revenue income stream;
- Enable access for all - providing social, health and environmental benefits of living by the canal and using the canals and their towpaths;
- Preserve our heritage assets and provide a vibrant network for regeneration and investment;
- Sustain the benefits that the canals bring to the Scottish economy.

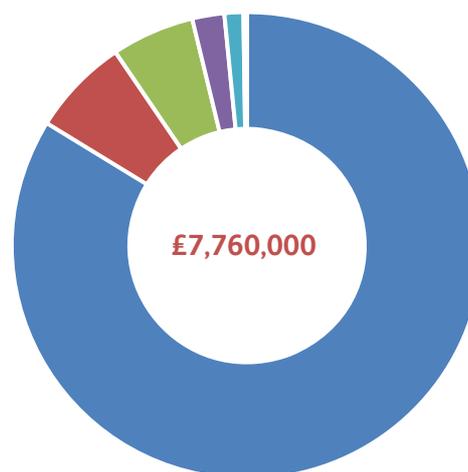
In our current investment position where investment levels remain significantly below that which is required, planning and delivery continues to be prioritised in the interest of safety over canal operability. As set out in the Asset Management Strategy, it is possible that we will required to move the canals into restricted operation, conservation or preservation eventually resulting in

reduced revenue generation, lower business reputation and a reduced public value. Maintenance activities will be restricted to our high risk and principal assets on strategic canal sections on a Must, Should and Could do basis and defect priority.

The range of planned expenditure and investment on asset management activities during 2019/20 is represented in Figure 3.

Figure 3 Planned expenditure and investment on asset maintenance activities in 2019/20

- 1. Capital Maintenance & Investment
- 2. Corrective Maintenance (Minor Works)
- 3. Corrective Maintenance (Major Works)
- 4. Inspections
- 5. Preventative Maintenance
- 6. Dredging



Risks identified in the AMP 2019/20 assessment include:

- Reduced safety and reliability of mechanised public road bridges and locks which may lead to closure of any one or more of the canals during the year;
- Continual asset degradation of heritage structures and shortened asset lives;
- Further restrictions to navigation due to lack of dredging & failure to deliver statutory depths
- Continued spread of invasive species across network.

Improvement activities that will be implemented during 2019/20 in order to provide feedback to the business for future planning and implementation to achieve continual progress in asset management and performance is summarised in Table 2. Key performance indicators will monitor our success on asset health improvement, planning and delivery shown in Table 3.

Undertake IAM ISO 55000 AM maturity assessment;
First formal gap analysis of asset management activities. Q1 19/20;
Continually review current organisational capability and resources required to deliver AMS;
Further enhance organisational AMS adoption and utilisation of AMSys to work towards 'live data';
Develop mobile working for M&E, maintenance and RSIs;
Review and, if appropriate, incorporate the updated UKCP18 data;
Develop a strategy for capturing and monitoring budgetary information against the plan;

Table 2 Improvement activities 2019/20

	Target 19/20
Complete asset inspections;	100 %
Overall average asset health rating;	2.5
Reduction of existing High Risk Assets;	10
Delivery against improvement plan;	100 %
Completion of priority major works programme;	100 %
Efficiency through additional defect capture;	10 % of DR budget

Table 3 KPIs 2019/20