

**Wards Affected:**

All Wards

**ITEM 14****CABINET****25 JULY 2012****Transport Infrastructure Investment**

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**Executive Summary:**

It has long been understood that Milton Keynes' Highway Infrastructure (roads, footways, redways, streetlights and bridges/structures), having been constructed over a relatively short period of time, will require significant capital investment to address the current backlog caused by this asset reaching the end of its 'working life'. We are currently at the point where the asset backlog is growing and we are not arresting this decline with current investment levels, therefore the asset is and will continue to decline.

In anticipation of this pressure and in line with the Financial Principles adopted by the Council in 2009 to address future liabilities, the Council has since 2011/12 been setting aside £1m of revenue funding each year to contribute towards financing the necessary investment through prudential borrowing.

By 2014/15, therefore, the Council will have the financial resources to borrow approximately £50m to invest in the repair and replacement of highway infrastructure to start addressing this backlog. If that investment is properly targeted, it will significantly extend the life of the current highway assets and reduce maintenance costs. Indeed, over the long term (25+ years), the investment should be repaid by savings on short term maintenance costs.

This report sets out an evidence-based investment programme in highway infrastructure, designed to make best use of the capital resource that is now available.

**1. Recommendation(s)**

- 1.1 That in principle, the allocation of up to £50m of additional investment in highway infrastructure over the next 7 years, as part of a long term (to 2039) sustainable asset management approach to highway infrastructure (as set out in Annex D), be approved.
- 1.2 That the resource allocation of £865k for the enhancement of grid road lighting, to be funded through prudential borrowing as part of the £50m additional investment in highway infrastructure, be approved
- 1.3 That the spend for an initial phase of £5 million made up of:-
  - (i) £2.7m in 2012/13 on footways and redways

- (ii) £1.435m in 2013/14 on footways and redways
- (iii) £0.865m in 2012/13 on enhanced grid road lighting.

be approved.

## 2. Issues

2.1 The Council's largest asset in value terms is contained in the highways infrastructure which consists of :-

- 56,000 street lighting columns
- 14,000 illuminated signs and electrical units
- 1170 km carriageway
- 1800 km footways
- 791 bridges
- 300 km redways
- 115 structures (mainly retaining walls)

As well as this there are significant numbers of street nameplates; un-illuminated traffic signs, traffic signal junctions, bus shelters and highways drainage systems. Also the asset will continue to grow in size year on year with the planned population growth for the borough to 300,000 people between now and 2026.

A highway must be available in perpetuity, so the council as the highway authority cannot allow the network to deteriorate to point where it becomes unsafe to use.

Like all assets that are subject to constant use by traffic of varying intensity from a young child pedestrian through to an abnormal load the asset suffers from wear and tear. It is also constantly exposed to the weather so suffers from UV degradation, rain water attack, and corrosion as a result of ground conditions and the use of rock salt. All of these things mean that the highway network needs constant attention to maintain it in a satisfactory condition for its use by residents to safely pass and repass along it. Periodically more sustained attention is required than simply a 'patch up' and major interventions are either required to extend the life of the asset through preventative maintenance such as surface dressing (tar and chip) or major reconstruction.

### Current Forecast Requirements

2.2 Looking at the key asset types individually:-

2.2.1 For Street lighting the major issue is the structural deterioration of the lighting columns. The vast majority of columns in the borough are galvanised mild steel which have corroded below ground level making visual detection of any corrosion almost impossible. From specialist inspection data collected over the last 6 years it has been identified that 40,000 columns will need replacing over a 25 year period. The proposed investment would enable the replacement of approximately 2000 columns per year on a rolling programme, at a cost of £15m up to 2018/19 and a long term strategy maintaining the assets for the future.

2.2.2 Bridges require a variety of treatments dependant on the nature of the deterioration which can vary from the occasional full replacement of a bridge through to individual bridge schemes to refurbish the waterproofing and/or parapets to both address the short term issues and to minimise whole life costs. A 15 year programme has been built up from the program of inspections carried out on the existing stock. The programme will be updated and amended following the periodic principal bridge inspections if more advanced deterioration is identified.

£14.2m of works to Bridges to be completed to 2018/19 and the full backlog of works being addressed by 2027 with maintenance thereafter.

2.2.3 Carriageways are assessed from continual surveys year on year which are reported as performance indicators. These surveys enable prioritisation of schemes and also provide a costing analysis for each scheme. The survey results show that the borough's carriageways have deteriorated to a point where major maintenance is required on:-

- Principal Roads (Strategic A class roads) – for 3% of roads
- Other A and all B & C class roads – for 6% of roads
- Unclassified Roads – for 10% of roads

From this a works plan is produced for the corresponding year based on condition. As road condition deteriorates and the priorities change the programme is adjusted accordingly to ensure that resources are targeted at those roads in the worst condition. The types of interventions vary from surface dressing to extend the life of the road, through preventing the ingress of water into the road construction through to full reconstruction where the road may have failed due to the use of inadequate materials in its original construction. The rationale for this is explained in annex B.

£21.4m of works to Highways to be completed to 2018/19 and a long term strategy addressing all backlog and on going structural maintenance issues.

2.2.4 Footways & Redways are very similar to carriageways but normally of a lot 'lighter' construction. Surveys are carried out annually to determine condition and provide priorities and programme lists with costs. The recent survey showed that 22% of them needed major work with a high percentage of the high priority ones being in CMK. This was no doubt behind the Council Budget decision to bring forward £5m of investment in footways. The rationale for the prioritisation and scheme selection is explained in annex C.

A programme of works has been developed which takes into account deliverability for £7.4m of works to Footpaths and Redways to be completed to 2018/19 and a long term strategy addressing all backlog and on going structural maintenance issues.

### **Way forward**

2.3 In order to restore the network and other highway assets to a reasonable standard and then maintain the infrastructure to that standard the council will need to make a significant investment over a prolonged period.

- 2.4 To establish a base figure for road network funding a 'Whole Life' cost approach calculation based on CIPFA principles has been applied. This has been undertaken to establish an initial 15 year budget proposal for capital investment that can be extrapolated to 25 years. The table in annex A to this report outlines the required minimum capital investment on a year by year basis in order to maintain the network at the current condition level. A significant capital investment and applying the 'whole life' principles will arrest the current decline and over a period have the effect of improving the network, enabling a sustainable approach to Highways Network Maintenance.
- 2.5 In anticipation of this budgetary pressure on the capital programme and in line with the financial principles adopted by the Council in 2009 to address future liabilities, the council has since 2011/12 been setting aside £1m of revenue funding each year to contribute towards financing the necessary investment through prudential borrowing
- 2.6 By 2014/15, therefore, the Council will have financial resources of £4m to use for the repayment of borrowing to support the investment in the replacement of highway infrastructure to start addressing this backlog. By continuing to set aside additional resources of £250k per annum until 2022/23 the Council will have sufficient resources to fully finance the current backlog and move to a sustainable on going maintenance programme by 2038. If that investment is properly targeted, it will significantly extend the life of the current highway assets and reduce maintenance costs. Indeed, over the long term (25+ years), the investment should be repaid by savings on short term maintenance costs.
- 2.7 So as to target the needs of the various highway assets proposed spending has been broken down to a year by year requirement and the budget split in line with the yearly allocation. The spreadsheet in Annex A shows how a combination of LTP funding and transport infrastructure investment would be allocated.
- 2.8 The prudential borrowing cost has been worked out using the works programme identified and the estimated life of the assets. In accordance with the standard calculations for prudential borrowing, no principal is repaid in year 1 and interest is assumed at 4.5%

Annex A sets out how this investment could be phased.

- 2.9 Elsewhere on this agenda is a report dealing with switching back on a number of the grid road streetlights which were switched off. So as to minimise the energy use that will result from the lights being lit it is proposed to "dim and trim" them. With the necessary work to fit the dimming and trimming equipment, including replacement of older lamps and replacing columns that are in a poor structural condition it is proposed to bring forward £0.865m of the investment to enable this important urgent work to be delivered within the current financial year.

### 3. Options

- a. Do nothing – continue to fund the infrastructure asset at current level - allow the condition to deteriorate leading to longer term higher repair costs . Milton Keynes Council may also be failing in its statutory duty.
- b. Strategy of managed decline – Resources are ‘rationed’ to keep the strategic network open with minimal reactive maintenance elsewhere and in the case of footways almost no maintenance at all.
- c. Planned Intervention – Once an asset has declined to a predetermined condition a planned surface treatment is carried out to extend the life and minimise ‘whole life’ costs.

### 4. Implications

#### 4.1 Policy

The Transport Vision and Strategy constitute the council’s third Local Transport Plan (LTP) for Milton Keynes and was submitted to the Department for Transport in April 2011. The Transport Vision and Strategy set out the borough’s policies and programme for delivering local, sub-regional and national policy objectives and will be reviewed on a regular basis and at a minimum every four years.

The LTP builds on the borough’s Sustainable Community Strategy (SCS) and the spatial planning policies in the Core Strategy as well as policy and guidance at an international, national and local level.

#### 4.2 Resources and Risk

The procurement strategy for the projects to be delivered in 2012/13 will be to formally tender the streetlighting works as an external contract subject to OJEU conditions. The footway works are proposed to be either delivered by the in house operational team where capacity allows or tendered through the Midlands Highways Alliance (MHA) if works are unable to be delivered by the in house team.

The works proposed to be delivered from 2014 onwards will be subject to the outcome of the OTP business case (tabled separately at this meeting).

Most of the costs associated with the preparation of programmes are already delivered within the normal processes of the corresponding officers’ time.

If spend approval for the programme is approved, a project team will be appointed to manage and deliver the programme. Costs for this resource will be chargeable back to the project directly. The costs of procurement will be funded from within the revenue budget.

This strategic approach to asset management, investment and maintenance will be more efficient in terms of revenue maintenance and is expected to deliver savings of £640k from 2015/16.

The 25 year infrastructure investment programme can be fully financed through the use of prudential borrowing and current levels of Transport capital funding.

A two year capital funding allocation has been confirmed for Integrated Transport and Highways Maintenance in 2013/14 and 2014/15, and assumptions have been made that this level of funding will continue to be available in future years.

This programme of works will be regularly reviewed to ensure the long term strategy accurately reflects both asset need and resource availability. The impact on performance indicators will also be recorded and evaluated.

The costs of prudential borrowing can be met initially from resources allocated in the Medium Term Financial Plan, although these resources would need to be increased to £6m by 2022/23 to enable the programme to be fully financed.

Y	Capital	Y	Revenue	N	Accommodation
N	IT	Y	Medium Term Plan	Y	Asset Management

#### 4.3 Carbon and Energy Management

With the implementation of new columns for streetlighting, they will also form part of the 'dimming and trimming' programme which will reduce the energy output of the units, this will have an effect of reducing the overall carbon output. With improvements to the highways network including cycleways the general public will be encouraged to use alternative forms of transport and thus contributing to carbon management.

#### 4.4 Legal

Milton Keynes Council as the highways authority has a statutory duty under section 41 of the Highways Act 1980, to maintain adopted highways in a safe condition for all users.

#### 4.5 Other Implications

##### Sustainability

The investment will assist to deliver the transport asset management plan (TAMP). One of the objectives of the TAMP is to consider sustainability in the context of minimising 'whole life' costs of the asset and also to maximise the value of the asset to the environment and the community.

When undertaking the improvement works we will ensure that sustainability is maximised through the use of a checklist, consisting of:-

- Scope and scale of scheme
- Cost benefit analysis (whole life cost)

- Design aspects
- Materials and products
- Re-use and recycling

We have explored various sustainable initiatives in recent years applying these principles and will continue to reinforce these when planning and delivering the future schemes outlined in the Transport Infrastructure Investment programme.

N	Equalities/Diversity	Y	Sustainability	N	Human Rights
N	E-Government	N	Stakeholders	N	Crime and Disorder

Background Papers:

Appendix A – CIPFA Calculations for Whole Life Costing approach for Carriageways

Appendix B – Carriageway Network Treatment Analysis Report

Appendix C – Footway Network Treatment Analysis Report

Appendix D – Capital Programme split by asset type showing 25 year plan to address backlog and maintain assets for the future.