Highways Infrastructure Asset Management Plan 2025

Section 6 – Forward Works Programme & Prioritisation

Coventry City Council

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Document Control

Version	Description	Date	Officer	Role	Approval
1.0	Minor general updates	August 2016	DCR	Asset Management Engineer	Cabinet
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N/A	Scheme Selection Methodology Passed Scrutiny Process	July 2022	N/A	N/A	Scrutiny Board
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2.0	Minor general updates Re-sectioning/accessibility update	May 2025	AC	Asset Management Engineer	Strategic Lead for Highway Operations & Delivery

6. Forward Works Programming

6.1. Introduction

The Council hold long-term forward programmes for all key assets with particular levels of detail present in carriageway and footway programmes. The Forward Works Programme (FWP) draws together different data sets and sources to provide prioritised lists updated periodically and used annually to determine planned maintenance schemes for the upcoming financial year.

Carriageway FWP – A list of every road in Coventry with a constructed surface. A standalone document.

Footway FWP – A list of every footway in Coventry with a constructed surface. A standalone document.

Structures FWP – A list of every structure maintained by The Council along with condition and inventory of each element determined from inspection data. Held within the BridgeStation system.

Drainage FWP – A list of potential works held and compiled by drainage engineers prioritised by impact of potential flooding risk.

6.2. Carriageway and Footways

As the highest value assets with the most impact on the day-to-day activities of infrastructure users in Coventry FWPs have been developed with multiple data sources and prioritisation methods in mind. The methodology of developing the carriageway and footway forward programmes are both similar due to the nature of the condition data and processing methods (UKPMS Detailed Visual Inspection surveys).

Multiple data sources feed into the FWP and contribute to decision making on which schemes to be undertaken.

On average **less than 3%** of roads **less than 1%** of all footways in Coventry can be treated annually with current budgets so a data driven decision making process is essential in targeting this limited resource. These figures equate to the average road in Coventry being treated once **every 36 years** and for each footway; once **every 123 years**; this is a mix of structural and preventative maintenance.

As of 2025 this process has gone through scrutiny twice in recent years (once in 2022 and again in 2024) and has been approved both times.

The following chart (figure 6.1) shows an overview of the process.

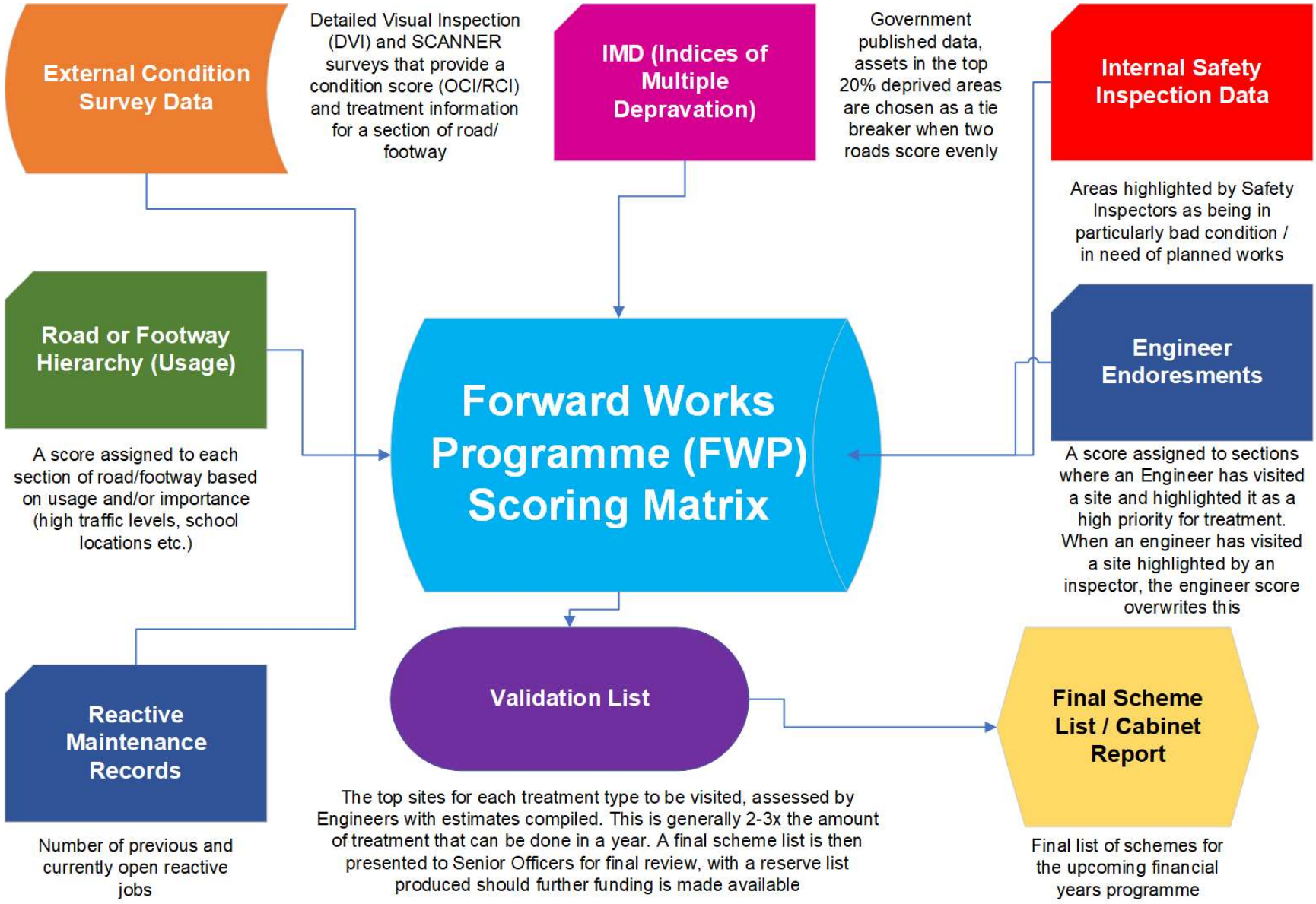

Figure 6.1. FWP Process/Input Diagram

6.2.1. Supporting Information and Scoring

Both programmes have multiple categories of information that feed into the decision-making process.

- Basic Information (ID codes, hierarchy, material, length, area, extents etc.)
- Data
    - Raw data: condition score (derived from SCANNER for classified roads and DVI for footways/unclassified roads), number of potholes/reactive works, deprivation score, inspector assessment
    - Scored data: scores assigned to raw data based on ranges
- Treatment information (year of last treatment & type, data-generated treatment, site assessed treatment and latest cost estimates)
- Deterioration information (likelihood a site requiring preventative maintenance will deteriorate to requiring structural maintenance within the immediate future).
- Engineer assessments – observations from any site visits

6.2.2. Decision Making Process

The scored data is summed to produce a total score for the section of road or footway, this is then multiplied by the hierarchy (usage figures) to ensure when sections score equally the area with the highest footfall, traffic or local importance (e.g. schools, medical facilities etc.) area prioritised.

Sections are ranked per treatment type to ensure a mixture of both preventative and structural maintenance is undertaken. It is of high importance to ensure preventative maintenance is undertaken as these treatments are considerably cheaper (~6x for roads, ~15x for footways) than structural maintenance and extend the life of the asset by sealing the surface and reducing the need for deeper, more expensive treatments in the future. This is why some sections which appear to be in better condition will be treated over others in a perceived worse condition as the treatment type and rate are completely different.

A provisional programme is compiled at the end of the calendar year for the upcoming financial year (April 1st – March 31st). The provisional programme is ranked using the score from the data inputs in the FWP and sites are visited and assessed by engineers for feasibility and amount of works that can be performed with budgets assigned for the upcoming financial year. Generally, 2-3x more treatments that can be undertaken are assessed to ensure a sufficient amount of reserve schemes and provide a basis for the following years programme.

In some cases, low ranked sites may make it into the programme, generally these are short treatment lengths selected where higher ranking sites would not fit remaining budgets due to length/extents of schemes. E.g. £700k of a £750k programme might be the top 10 sites, but sites 11-14 may come in at over £50k so site 15 with an estimated value of £50k would be chosen instead.

Other instances where this may occur are when a section has a lower score but adjacent sections score much higher and the scheme encompasses the entire extent. E.g. a road has 3 sections of 30m each with sections 1 and 3 in the worst condition, the section in the middle would be treated as a scheme comprising the entire length instead of being left out. This minimises joins between structural treatments (decreasing deterioration rate) and saves on mobilisation costs associated with a scheme.

Finalised schemes lists are approved by cabinet around February or March with works to start in April of each year. This list is generally reflective of the final works programme for the year however due to unforeseen circumstances some schemes may be undertaken that are not reported to cabinet, this could be for a variety of reasons such as:

- Extra funding becoming available mid-way through a financial year (grants from central government such as winter damage grants, extra pothole funding; these often come with restrictions on how/when they can be spent).
- Efficiencies in reported works; some schemes may come in under-budget allowing extra schemes to be added or existing schemes to be extended.
- Schemes having to be deferred to future years due to utility work clashes or other reasons (e.g. busy route treatments during City of Culture, housing developments in progress etc.).

Generally, any schemes added mid-year come from reserve schemes identified when compiling the initial programme (schemes scored that barely missed out due to budgetary constraints) and have already been visited and estimated.

The carriageway and footway FWPs are live documents. Scores/ranks can change as and when new data becomes available throughout the year. Condition survey is collected quadrennially (1/4 of the network surveyed annually), inspector observations are continually collected (reflected quarterly in the FWP), deprivation data is published annually by the government and engineer observations are collated and batch updated. In addition; completed schemes have their scoring factors removed until they are next surveyed (as part of the four-year cycle).

6.2.3. Exemptions

A small amount of planned carriageway and footway maintenance schemes may be excluded from the asset management approach/scoring prioritization, these include:

- Works undertaken via funding received via Citizen Housing (sale of ex-council homes).
    - Funding is received via a revenue stream independent of capital revenue provided either corporately or from the DfT (Department for Transport) / WMCA (West Midlands Combined Authority) and is ringfenced for schemes in specific areas
- Resurfacing works on structures as part of large bridge/structure schemes.
- Resurfacing or footway works as part of traffic and/or safety schemes; as often the asset location/layout/function is modified these generally fall outside the scope of traditional maintenance.

6.2.4. Programme Accuracy

Data collected for the FWP has been balanced to ensure the cost of data collection is beneficial compared to its usage. DVI data is primarily used as it's suitable to generated schemes from, is of a national standard and deterioration models can be run against it. This means it's suitable for generating works programmes, predict future condition as well as getting a good picture of the current backlog of works on the network for both carriageway and footway assets.

On a section-by-section/scheme-by-scheme level there are potential for some inaccuracies to arise:

- DVI surveys are only undertaken on a four-year cycle.
    - Schemes with significant deteriorating since surveys are identified via inspector condition forms.
- Some sites may be suitable for treatments which may be either deeper/shallower or more expensive/cheaper
    - E.g. some bituminous footway sites recommended for slurry seal or reconstruction may be more suitable for footway overlay which is more expensive or cheaper respectively. These are identified during the engineer validation process.

Where anomalies occur (such as high Condition Index but no generated treatment), these sites are added on to an investigation list for engineers to visit and assess throughout the year with the programme updated accordingly.

6.3. Non-key assets

Non-key assets are generally primarily maintained on a reactive basis, thus there is little benefit of producing a FWP as this would be extremely speculative. Most damage to these assets is extremely difficult to predict (such as. vehicle strikes on bollards etc.); time spent on inventory collection and planning works on a network level would be extremely costly compared to the little benefits of producing plans.