



**Highway Asset
Annual Status Report
Carriageways, 2023**

Carriageways Status Summary Statement

1. Investment:

- At no time in the last 11 years has the level of investment been close to that required to maintain the condition (the steady state value).
- Council investment in the last two years (excluding government grant monies) in planned maintenance of carriageways has been less than half that required to keep the asset in a steady state.
- £128k pa is committed to the completion of reactive repairs.

2. Works

- Based on the last 11 years, on average each road gets a new surface every 72 years.
- Based on the last 5 years on average each unclassified road can expect to be resurfaced once every 131years.
- 3,506 repairs were completed in 2022/23, equivalent to 18 repairs per working day.
- Less than 25% of carriageway defects are repaired within the 5 working day target.

3. Condition:

- A large and growing level of defects requiring reactive repair are being identified.
- The “measured by survey” condition of classified roads over the last 11 years has improved a small amount. The escalating number of minor repairs requires however indicates ongoing deterioration.
- The condition of A and B roads is comparatively good and reasonably steady due to the direction of available funding towards treatment of these roads.
- Whilst not as good comparatively as A and B class roads, C roads are in a reasonable condition and are improving over time, in terms of survey measured condition.
- Unclassified roads are in a comparatively poor condition and are deteriorating.

4. Backlog

- A huge backlog of deferred maintenance exists comprising of:
 - Roads in need of resurfacing £23m
 - Roads in need of surface treatment £10m
 - Areas of road in need of patching £6m
 - Minor defers in need of repair £9m.

5. Risk Review

- The risk posed to user from the condition of the asset is increasing.
- The “risk” of transferring the cost of todays use of the asset to a future generation to pay for is not a risk it is a fact. It is occurring now.

1. Purpose

This report provides managers and members with an update on the state of council managed roads. It proposes targets for repair, condition and quantities of work (numbers of repairs and lengths of resurfacing and surface treatment) that will be included in a council Highway Asset Management Plan (HAMP).

Status

The report describes the status of the council's carriageway in terms of:

- condition,
- level of defects

Status is reported as of March 2023.

The Asset

Scale

The council manages 1,183km of carriageways,

- Roads range from busy major roads to minor rural lanes and residential streets.
- 58% of roads are unclassified [688km]
- 51% are urban roads and 49% rural.
- 37% are residential streets (urban unclassified [434km])

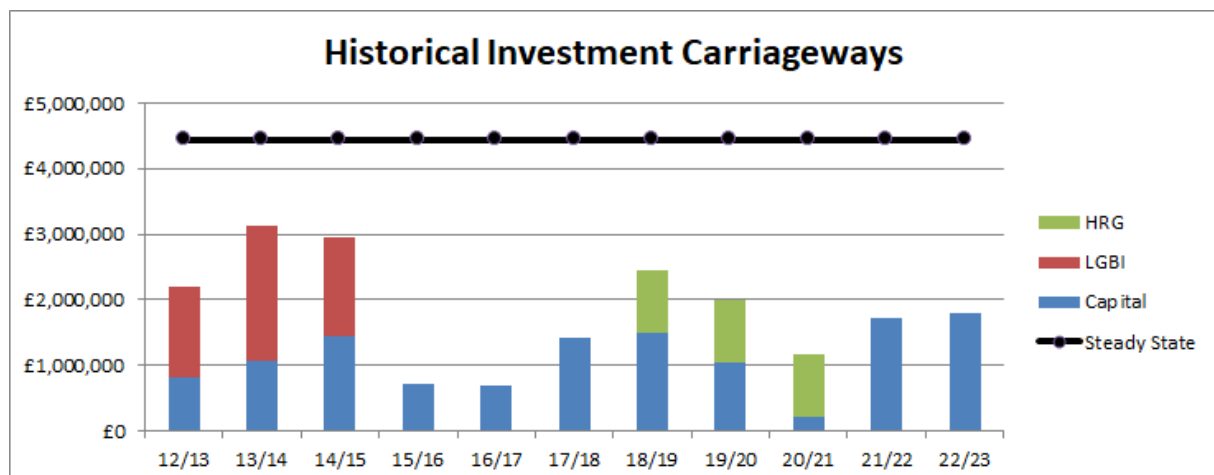
Value

In 2015-16 the gross replacement value of the carriageway asset was estimated at £1,215 million.

2. Investment

Capital Investment

Historical capital investment in carriageway maintenance has been as shown below:



Additional monies were supplied by Welsh Government, between 2012/13 and 2014/15 and 2017/18 and 2020/21. The table below shows the scale of the additional monies supplied.

| Investment / Cost Planned Maintenance (£000's) | | | | | | | | | | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| £,000's | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 | 19-20 | 20-21 | 21-22 | 22-23 |
| Capital | £816 | £1,065 | £1,449 | £706 | £700 | £1,430 | £1,492 | £1,046 | £210 | £1,710 | £1,799 |
| Additional (LGBI, WG Grant) | £1,370 | £2,050 | £1,500 | | | | £959 | £954 | £950 | | |
| Total | £2,186 | £3,115 | £2,949 | £706 | £700 | £1,430 | £2,451 | £2,000 | £1,160 | £1,710 | £1,799 |

Average Investment

The average investment in planned maintenance between 2012/13 and 2022/23 was £1.8m pa. Without the monies provided by Welsh Government this would have been £1.1m pa. The estimated sum required to maintain a steady state of current condition is £3.9m pa.

Annual Depreciation Charge (ADC)

In 2022/23 the ADC of the carriageway asset was estimated at £3.3m pa. This value is derived from a nationally prescribed method devised by CSSW. ADC represents an estimate of the average investment in replacement of the asset required each year over its lifespan to keep it in service i.e. it is similar but not the same as the steady state. It provides an alternative view of what is required annually.

➤ **At no time in the last 11 years has the level of investment been close to that required to maintain the condition (the steady state value).**

In the last two years the council has invested £1.7m and £1.8m, less than half of the steady state figure.

➤ **Council investment in the last two years (excluding government grant monies) in planned maintenance of carriageways has been less than half that required to keep the asset in a steady state.**

Routine Reactive and Cyclic Maintenance Costs

The annual cost of routine, reactive and cyclic maintenance is approximately £128k. A substantial quantity of reactive repairs are completed each year. This figure includes for the reactive repair of defect on all highway assets (i.e. not just carriageways)

➤ **£128k pa is committed to the completion of reactive repairs.**

3. Works Undertaken

Planned Maintenance Outputs

The sums invested above have allowed the following amount of works to be undertaken.

| Planned Maintenance Works Undertaken by Treatment Type | | | | | | | | | | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|
| | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 | 19-20 | 20-21 | 21-22 | 22-23 |
| Surface Treatment (km) | 23.2 | 17.3 | 15.3 | 10.2 | 11.1 | 6.0 | 5.5 | 10.8 | 0.0 | 9.4 | 6.2 |
| Resurfacing (km) | 17.9 | 19.9 | 19.3 | 2.4 | 2.0 | 7.0 | 12.7 | 7.4 | 8.2 | 7.8 | 7.9 |
| % with a new surface (Return Period) | 3.5% (29yrs) | 3.1% (32yrs) | 2.9% (34yrs) | 1.0% (94yrs) | 1.1% (90yrs) | 1.1% (91yrs) | 1.5% (65yrs) | 1.5% (65yrs) | 0.7% (145yrs) | 1.5% (69yrs) | 1.2% (84yrs) |

Over the last 11 years, on average each road gets a new surface every 72 years. Road surfaces do not last this long.

The council uses a risk matrix approach to prioritise resurfacing and surface treatment works. This has meant that work had been focused on classified roads (A, B and C class). The following table provides a breakdown of the works by road class.

| Planned Maintenance Works Return Periods (Years) by Road Class | | | | | | |
|--|-------|-------|-------|-------|-------|------------------------|
| Road Class | 18-19 | 19-20 | 20-21 | 21-22 | 22-23 | Average (last 5 years) |
| A Road | 55 | 71 | 66 | 21 | 65 | 46 |
| B Road | 16 | 47 | 132 | 53 | 55 | 39 |
| C Road | 47 | 35 | 261 | 54 | 49 | 54 |
| Unclassified Roads | 214 | 53 | 213 | 321 | 145 | 131 |

Based on the last 5 years on average each unclassified road can expect to be resurfaced once every 131 years.

Reactive and Routine Maintenance Outputs

The following amount of reactive maintenance works have been undertaken.

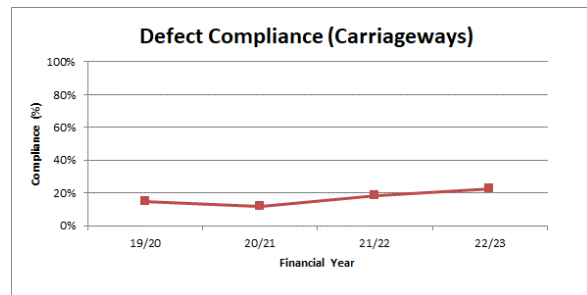
| Reactive Maintenance Works Identified and Repaired | | | | |
|--|---------|---------|---------|---------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 |
| Total Repairs | 1,590 | 2,767 | 3,343 | 3,506 |

In 2022/23 3,506 carriageway repairs were completed. The level of repairs completed equates to 18 repairs per working day. This is a substantial amount of repair. Public dissatisfaction with roads often relates to these sorts of defects, e.g. pot holes.

➤ **3,506 repairs were completed in 2022/23, equivalent to 18 repairs per working day.**

Defect Repair Compliance

Since October 2018, the council standard has required that all defects be repaired within 5 working days of identification. The chart shows that less than 25% of carriageway defects are repaired within this response time.



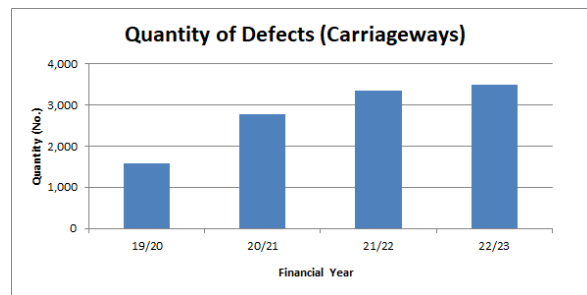
➤ **Less than 25% of carriageway defects are repaired within the 5 working day target.**

4. Condition

The condition of roads is reflected by the number of defects requiring repair (recorded during inspections) and the lengths of road that require resurfacing (recorded by condition surveys).

Defects

Current standards for defect repair are in the Maintenance Manual. Defects considered potentially hazardous to users are identified for repair. The quantity of defects being identified is large and continuing to increase.



➤ **A large and growing level of defects requiring reactive repair are being identified.**

It should be noted that the defects recorded via inspection are only those that meet the council's standard for assessment and potential repair. Details of the full extent of defects on the network is given later in this report.

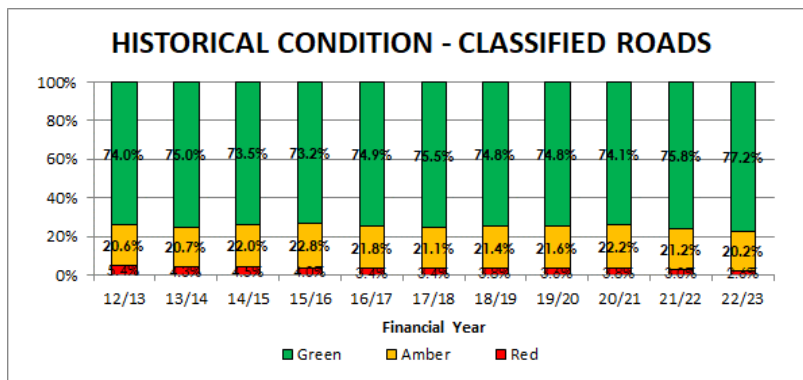
Measured Condition

Classified road condition is measured annually by machine “scanner” surveying. An AI condition survey of all roads was undertaken in 2021/22 using the Gaist system. This survey included unclassified roads which the council had no previous condition information on. The surveys report condition in relation to:

- Poor Condition (red): sections of road in a state where structural maintenance should be considered are reported as red.
- Deteriorating Condition (amber): sections of road in a state where maintenance should be considered, this may be resurfacing (amber 1) or sections of road in the early stages of deterioration where preventative maintenance should be considered (amber 2)

Classified Roads (SCANNER)

Classified roads (A, B and C class roads) make up 42% (495km) of the network. The measured condition of these roads as measured by SCANNER is shown.



➤ **The condition of classified roads over the last 11 years has improved a small amount.**

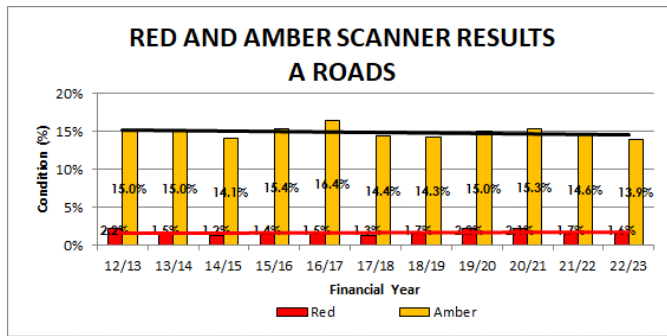
A Roads 155km (13% by length). A class roads are in most cases the council's busiest roads.

Based on % in poor condition current condition is:

- 1.6% (2.5km) in a deteriorated red condition
- Within the HAMP target of 2%
- Ranked 1st nationally (2021/22)
- Ranked 1st out of 10 of semi-rural Welsh authorities (2021/22)

In addition to road in red condition a further 13.9% (21.5km) is in a deteriorating amber condition

Trend in Condition



Poor Condition: ■
 - Decreasing (improving)

Deteriorating Condition: ■
 - Decreasing (improving)

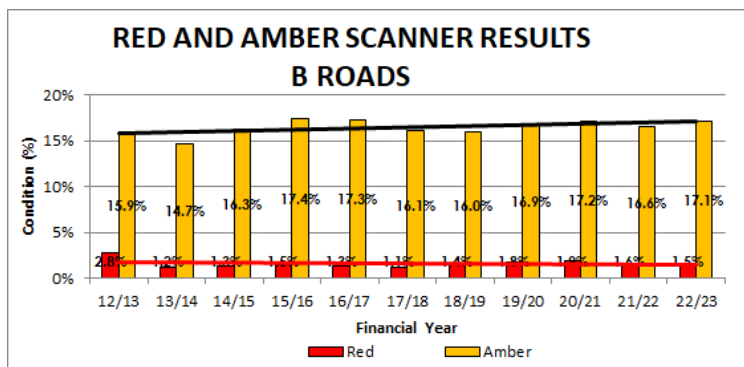
B Roads: 78km (7% of the network by length).

Based on % in poor condition current condition is:

- 1.5% (1.2km) in a deteriorated red condition
- Within the HAMP target of 3%
- Ranked 1st nationally (2021/22)
- Ranked 1st out of 10 of semi-rural Welsh authorities (2021/22)

In addition to road in red condition a further 17.1% (13.4km) is in a deteriorating amber condition

Trend in Condition



Poor Condition: ■
 - Decreasing (improving)

Deteriorating Condition: ■
 - Increasing (getting worse)

➤ **The condition of A and B roads is comparatively good and reasonably steady due to the direction of available funding towards treatment of these roads.**

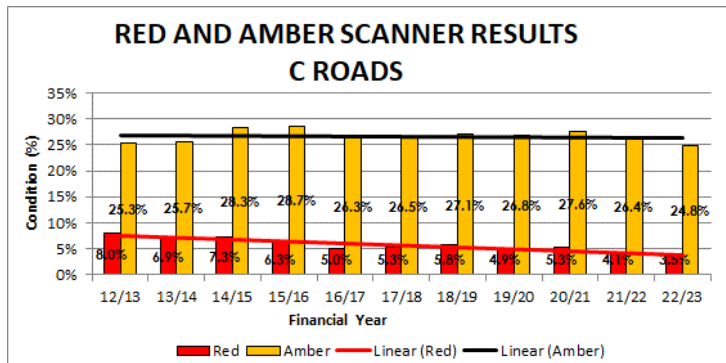
C Roads: 262km (22% of the network by length)

Based on % in poor condition current condition is:

- 3.5% (9.2km) in a deteriorated red condition
- Within the HAMP target of 7%
- Ranked 4th nationally (2021/22)
- Ranked 4th out of 10 of semi-rural Welsh authorities (2021/22)

In addition to road in red condition a further 24.8% (65.1km) is in a deteriorating amber condition

Trend in Condition

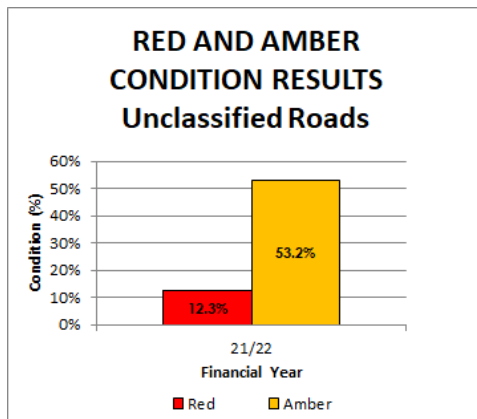


Poor Condition: ■
 - Decreasing (improving)

Deteriorating Condition: ■
 - Steady
 (approximately the same)

➤ Whilst not as good comparatively as A and B class roads, C roads are in a reasonable condition and are improving over time.

Unclassified Roads: 688km (58% by length).



Gaist condition survey of Unclassified Roads in 2021/22 report condition as:

- 12% (76km) in a deteriorated red condition
- 53% (330km) in a deteriorating amber condition

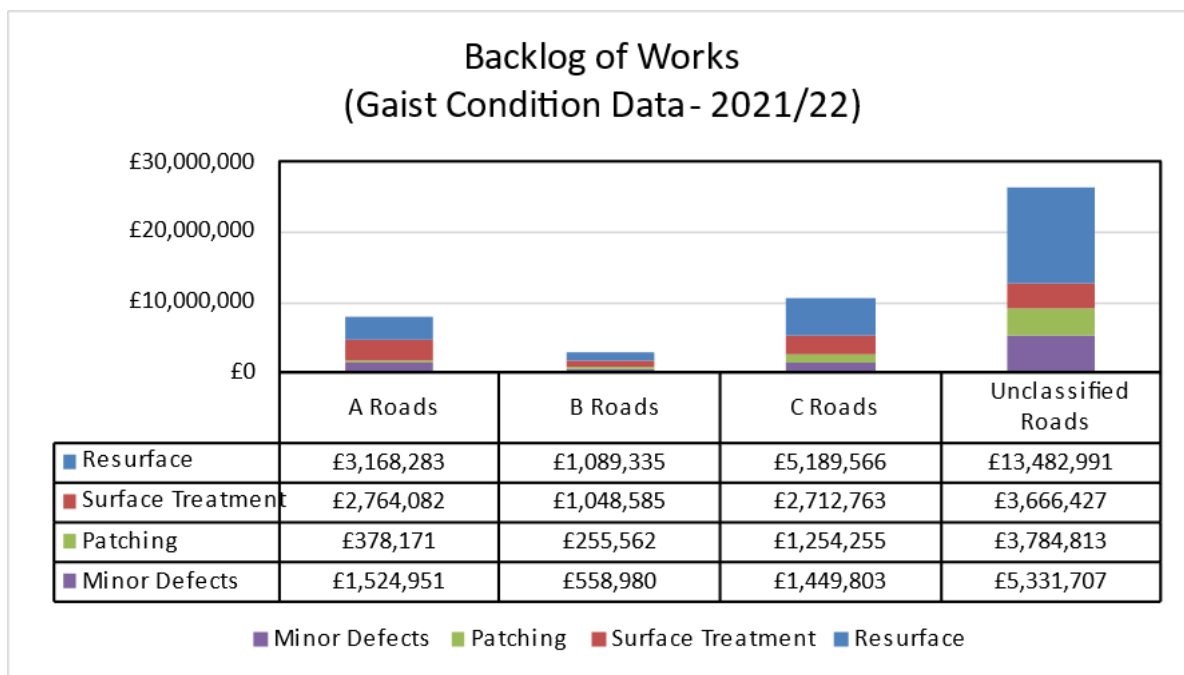
This is the first survey of unclassified roads. There is no data available to show if these roads are deteriorating. The level of replacement is however so low that deterioration will be happening.

➤ **Unclassified roads are in a comparatively poor condition and are deteriorating.**

Backlog

Previous reporting of backlog has been based on SCANNER survey results for the classified roads. This approach reports on the need for resurfacing or surface treatment. The data collected by the GAIST survey provides the ability to report maintenance needs more fully. The following chart shows a backlog of works for each road class and the following work types:

- **Resurface** – Sections of poor condition greater than 100m.
- **Surface Treatment** – Sections of deteriorating road greater than 100m
- **Patching** – Sections of poor condition less than 100m
- **Minor Defects** – All other defects (except fretting, chip loss and vegetation)



➤ **The total backlog using the above method is £48m.**

This data illustrates that in addition to desirable resurfacing and surface treatment schemes there is a currently unmet need for patching (of small badly deteriorated sections of road not long enough to form a resurfacing scheme). There are also a myriad of minor repairs. At the time of this survey 29,000 minor defect locations (that are not on sites of potential schemes or patching) were identified. Approximately 4,000 defects per year are currently being repaired.

A huge backlog of deferred maintenance exists comprising of:

- **Roads in need of resurfacing £23m**
- **Roads in need of surface treatment £10m**
- **Areas of road in need of patching £6m**
- **Minor defers in need of repair £9m.**

5. Risk Review

The risk posed to user from the condition of the asset is increasing.

The “risk” of transferring the cost of today’s use of the asset to a future generation to pay for is not a risk it is a fact. It is occurring now.