

The Highland Council
Caithness and Sutherland Area Committee
20 May 2013

| | |
|-------------|-----------------|
| Agenda Item | 8. |
| Report No | CS-17-13 |

Maintenance Programme for Road and Bridge Works

Report by Director of Transport, Environmental and Community Services

Summary

This report invites Members to approve the Maintenance Programmes for Surface Dressing, Resurfacing, and Bridge Maintenance for the Caithness and Sutherland Area for 2013/14.

1. Introduction

- 1.1 The Highland Council has a statutory obligation under the Roads (Scotland) Act 1984 to manage and maintain the local public road network.
- 1.2 The budget for roads maintenance is set by the Transport, Environmental and Community Services Committee and is devolved to Area level for operational purposes.
- 1.3 Maintenance programmes are prepared by the Area Roads and Community Works Manager in accordance with the principles set out in the Road Asset Management Plan and presented to Members for approval.

2. Budget Distribution

- 2.1 The Road Maintenance budgets are allocated under the following headings:

Winter Maintenance (Revenue)

Cyclic Maintenance (Revenue) including:

- Surface Dressing
- Verge Maintenance
- Road Marking Renewal
- Signs Maintenance
- Drainage Maintenance
- Gully Cleansing
- Footpath Maintenance
- Patching
- Other Cyclic and Routine Maintenance

Structural Maintenance (Capital) including:

Road Structural Maintenance
Bridge Structural Maintenance

- 2.2 This report deals specifically with budgets and programmes for structural maintenance, including bridges, and surface dressing.
- 2.3 Budgets for the current year will be set by the Transport, Environmental and Community Services Committee on 16 May 2013. The figures below are based on the budgets presented to the TECS Committee for approval on 16 May and may be subject to change.

| Maintenance Budgets £ | Revenue | Capital |
|--------------------------------|-------------------|-------------------|
| Surface Dressing | £640,639 | |
| Capital Structural Maintenance | | £1,022,618 |
| Share of additional £2million | £569,742 | |
| Bridge Maintenance | | £204,870 |
| Total | £1,210,381 | £1,227,488 |

- 2.4 A broad description of these activities is provided in **Appendix 1** to this report.
- 2.5 This report focusses on the 2013/14 programmes for:
- Surface Dressing (**Appendix 2**)
 - Road Structural Maintenance (**Appendix 3**)
 - Bridge Maintenance (**Appendix 4**)
- 2.6 These programmes specifically support the following element of the Programme for the Highland Council:

“Working together for better infrastructure”

“3. We will spend preventatively on our roads according to need.”

3. Road Maintenance Programmes

- 3.1 Schemes were selected for inclusion in these programmes on the basis of need using information gathered from a variety of sources.
- SRMCS road condition survey and map based computer analysis – using data gathered at road speed using specialist survey vehicles and equipment
 - Safety Inspections
 - Detailed Inspections
 - Requests from Members and members of the public
- 3.2 Schemes have been prioritised with the safety of the travelling public and sustainability of the road network as main objectives. The main factors considered are:
- Road condition
 - Likelihood of further deterioration
 - Lifeline status
 - Usage and traffic level
 - Public and School Transport route

4. Surface Dressing

- 4.1 The proposed programme for Surface Dressing is set out in **Appendix 2**.
- 4.2 As Members may be aware, there were problems with chip loss at a number of the surface dressing sites carried out during 2012 (although the work done at the remainder of the sites was perfectly satisfactory.)
- 4.3 A review of the sites affected has taken place and a number of improvements to the surface dressing process have been identified for implementation in 2013 in an effort to address these problems. There has also been a thorough investigation of the design, materials and application techniques.
- 4.4 No single cause of failure has been identified and all parameters investigated have been found to conform with the published standards and specifications.
- 4.5 It is proposed that spending on surface dressing in Caithness and Sutherland this year will be restricted to £250,000 so that the whole procedure can be rigorously monitored in order to ensure that best practice is achieved and a repeat of the problems is avoided.
- 4.6 Improvements to rolling and aftercare techniques have been identified, and work will be carried out slightly earlier in the year and trials will take place with chippings from different quarries and at higher spread rates of bitumen.

4.7 The remainder of the budget available for surface dressing (£390,639) will be allocated to drainage works and other essential preparatory work, to facilitate a return to a more extensive surfacing programme in future years. More detail of proposed drainage and preparatory work will be provided at a future date.

4.8 Remedial works to sites affected by chipping loss will be carried out as part of the overall surface dressing programme.

5. Road Resurfacing

5.1 The proposed programme for Road Resurfacing is set out in **Appendix 3**.

6. Bridges

6.1 Bridge work is identified through a programme of inspections at regular intervals, and the programme for 2013/14 is contained in **Appendix 4**.

7. Implications

7.1 There are no resource implications as all proposals are within the allocated budgets.

7.2 There are no legal implications arising from this report.

7.3 There are no known equalities issues, although maintenance of the road network will enable better access to services for everyone.

7.4 New patterns of rainfall seem to be occurring leading to wash out and blockage of drains. The focus on drainage improvements during 2012/13 will help to mitigate the situation while at the same time reducing the exposure of the road construction layers to water seepage thus extending the life of the road.

7.5 There are no risk implications arising from this report.

8. Recommendation

8.1 Members are invited to approve the Maintenance Programme for Surface Dressing, Road Structural Maintenance and Bridge Maintenance for the Caithness and Sutherland Area for 2013/14.

Designation: Director of Transport, Environmental and Community Services

Date: 9 May 2013

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Appendix 1

Road and Bridge Maintenance Activities

Surface Dressing

This activity involves treatments, or works, on carriageways, footways and cycleways that repair surface defects such as cracking or polishing of the surface aggregates. Treatments that seal the surface prolong the life of the asset by preventing ingress of water which can lead to frost damage and deterioration of the constituent construction materials. It is also very important to maintain adequate friction levels for safety reasons.

For carriageways, footways and cycleways the treatments will include:

- Surface dressing: bitumen spray and stone aggregate chippings
- Thin surfacing materials
- Specialist friction enhancing treatments

Structural Maintenance

This activity involves treatments, or works, that repair defects affecting the structural strength and life of the asset; including bridges, retaining walls, carriageways, footways and cycleways.

For carriageways, footways and cycleways the treatments will include:

- Overlay and inlay of bituminous materials – the wearing course.
- Complete renewal of one or more of the structural layers, using recycled materials where available.

For bridges and retaining walls treatments will include:

- Renewal of bridge decks
- Pressure grouting of masonry
- Repairs to other structural elements

Cyclical Maintenance

This activity includes the reactive and routine (cyclic) maintenance tasks:

- Reactive – responding to inspections, complaints and emergencies; make safe plus temporary and permanent repairs
- Routine – regular consistent scheduled work, generally :
 - Minor works and patching
 - Drainage; cleansing and repair
 - Grass cutting
 - Management of landscaped areas and trees
 - Tensioning and repair of fences and barriers
 - Cleansing and repair of traffic signs and bollards
 - Replacement of road markings and studs
 - Cleansing and minor works to bridges and structures

Appendix 2

Caithness and Sutherland Surface Dressing Programme 2013/14

| Ward | Route | Location | Length | Width | Road area (m ²) | Comments |
|---|-------|--|--------|-------|-----------------------------|--|
| 2 - Thurso | A836 | Mountpleasant to Toll | 310 | 6 | 1860 | |
| | U ? | Wolfburn Rd, West Gills | 375 | 5.5 | 2062 | |
| | U4299 | Towerhill Rd, Thurso | 185 | 5.5 | 1017 | |
| 3- Wick | | | | | | |
| 4 - Landward Caithness | C1001 | Isauld-Glengolly Rd at Shebster | 60 | 6 | 360 | |
| | C1006 | Wester Br – Greenland Rd at Bower Jct to bend | 385 | 3 | 1232 | |
| | C1010 | Barrock – Ham – Brough Rd at school north | 450 | 3 | 1440 | |
| | U1899 | Tongside Rd | 688 | 2.7 | 1995 | |
| | U2631 | Braehour Rd | 1192 | 2.8 | 3576 | |
| | U2100 | Brimms Rd | 730 | 3 | 2336 | |
| | U1871 | Gerston | 621 | 3.2 | 2111 | |
| | C1053 | Lybster-Achavanich Rd at Osclay Rd - Castleheather | 1400 | 3 | 4480 | |
| | C1037 | Hastigrow-Upper Gills Rd at Brabstermire - Slickly | 1300 | 3 | 4160 | |
| | U1376 | Westerloch – Killimster Rd, whole road | 2200 | 3 | 7040 | |
| | A99 | Wick – JOG at N of Quoys | 550 | 6 | 3410 | |
| | U1237 | Puldagon – Newton Rd at Quarry – Old Stirkoke Rd | 360 | 3 | 1152 | |
| | U1210 | Brickigoe Rd, whole rd | 3800 | 3 | 12160 | |
| | C1037 | Hastigrow –Upper Gills Rd at old shed to Alterwall | 290 | 3 | 928 | |
| | C1006 | Westerbridge – Greenland Rd A99 jct to Auckhorn | 1040 | 5 | 5408 | |
| | B870 | Watten to Watten Mains | 680 | 6 | 4080 | |
| 1 - North Sutherland | B871 | Kinbrace – Syre Rd Palm Loch to East | 4925 | 3 | 15760 | |
| | A838 | Lairg – Laxford Br Rd Kinlochbrae Forest | 2040 | 3 | 6528 | |
| | A838 | Lairg – Laxford Br Rd E of Lochmoreside S Forest | 423 | 3 | 1353 | |
| | A838 | Riconich – Durness Rd Gualin House | 593 | 6 | 3558 | |
| 1 - West & Central Sutherland | A836 | Diversion Dam – Auction Mart | 1800 | 6 | 10,800 | |
| 5 - East Sutherland & Edderton | A949 | Achue - Spinningdale | 2200 | 5.5 | 12,100 | |
| | A897 | Kildonan Lodge | 500 | 2.8 | 3,500 | To improve skid resistance on worn section of road |

Appendix 3

Caithness & Sutherland Road Resurfacing Programme 2013/14

| Ward | Route | Location | Length | Width | Road area (m ²) | Comments |
|--|---------------------------------|--|--|-------|-----------------------------|--|
| 2 - Thurso | | | | | | |
| 3- Wick | A882 | Wick – Georgemas Rd From 30mph signs | 120 | 6 | 720 | |
| 4 - Landward Caithness | A836 | John O Groats – Thurso Rd Barrogill Mains | 200 | 6 | 1200 | |
| | A836 | John O Groats – Thurso Seals Colony – Gills Bay | 293 | 6 | 1758 | |
| | B876 | Reiss – Castletown Rd Greenland Rd Jct | 100 | 6 | 600 | |
| | B870 | Mybster – Glengolly Rd Framside | 800 | 3 | 2560 | |
| | C1033 | Greenland – Crockster Toll Rd Greenland Rd Jct with B876 | 50 | 3 | 160 | |
| | U2144 | Hill of Forss Rd Fullerton – A836 jct | 750 | 3 | 2400 | |
| | C1065 | Latheron – Braehungie Rd Bobby Stewart's – Bend | 600 | 3 | 1920 | |
| | U1280 | Wester Watten – Newton Rd At farm | 200 | 3 | 640 | |
| | C1037 | Hastigrow – Upper Gills Rd Brabstermire Fm – School Ho | 373 | 3 | 1193 | |
| | U1779 | Camster Rd Whole Rd | 389 | 2.8 | 1140 | |
| | C1065 | Latheron – Braehungie Rd U1063 jct to Bobby Stewarts | 600 | 3 | 1920 | |
| | 1 – North Sutherland | A838 | Lairg – Laxford Br Rd Creag nam Beart | 120 | 3 | 384 |
| B873 | | Syre – Altnaharra Rd Altnaharra Jct – E various sections | 700 | 3 | 2240 | |
| B871 | | Kinbrace – Syre Rd Tire Bales | 300 | 3 | 2240 | |
| C1034 | | Altnaharra – Hope Rd Walkers Car Park | 1242 | 3 | 3974 | |
| 1 - West & Central Sutherland | C1003 | Inverkirkaig Beach - Boundary | 800 | 3.0 | 2400 | Note that a road condition survey is underway to confirm Ward 1 (West & Central) priority schemes for 2013 so this programme may need to be amended. |
| | A838 | Various Sections | 1165 | 3.3 | 3845 | |

| | | | | | | |
|--|-------|------------------------|-----|-----|------|---|
| 5 – East Sutherland &Edderton | U2581 | Johnstone Place, Brora | 450 | 5.5 | 2475 | Note that a road condition survey is underway to confirm Ward 5 priority schemes for 2013 so this programme may need to be amended. |
| | U2859 | Seaforth Place, Brora | 200 | 5.5 | 1100 | |
| | C1022 | Tannachy - Dalreavoch | 800 | 2.8 | 2240 | |
| | U2891 | Golf Road, Brora | 600 | 5.5 | 3300 | |
| | U3309 | Skelbo Street | 800 | 3.3 | 2640 | |
| | U3396 | Rowan Avenue, Dornoch | 150 | 5.5 | 825 | |

Appendix 4

Caithness and Sutherland Bridge Maintenance Programme 2013/14

| Ward | Bridge Code | Bridge Name | Description of Works | Comments |
|-------------------------------|--|---------------------|---|----------|
| 2 - Thurso | No maintenance works currently planned for 2013/14 | | | |
| 3 - Wick | B91590010 | Wick Harbour Br | Removed spalled concrete and clean bearing shelves | |
| 4 - Landward Caithness | A08360410 C50 | West Murkle Culvert | Repair invert, training walls and cement screed to exposed rebars | |
| | C10210030 | Bhuailteach Culvert | Repair headwalls | |
| | U10510020 | Dunbrae Br | Replace verges with kerbs and remove vegetation | |
| | U10510010 | Rhemullen Br | Replace verges with kerbs and remove vegetation | |
| | C10060100 | Auckhorn Br | Repair training wall | |
| | C10650010 | Denmoss Culvert | Replace following erosion damage | |
| 1 - North Sutherland | A08360220 | Inchkinloch Br | Works required to training walls | |
| | A08360230 | Lettermore Br | Reset coping stones & place rock armour at abutments | |
| | A08360290 | Naver Br | Clear offlets & repair tar at offlets | |
| | A08360260 | Borgie Br | Pointing, repairs to wing wall, remove gorse | |
| | A08380160 | Chorrain Br | Rock armour to W corner of S abutment | |
| | A08380150 | Dionard | Rebuild SW & SE training walls | |
| | A08380120 | Ghairbh | Repair training walls | |
| | A08380210 | Hope | Repair d/s w training wall, replace handrail at e abutment, improved drainage | |
| | A08380070 | Kinloch Br | Repair u/s training wall, scour to d/s apron, remove vegetation | |
| | A08380200 | Polla Br | Remove tree on d/s cutwater & repair d/s training wall | |
| | A08380130 | Tarbhaidh | Kerb and concrete verge, offlets | |
| | B0871 | Feithe Chregain | Repairs to apron & pressure point arch barrel. | |
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| Ward | Bridge Code | Bridge Name | Description of Works | Comments | |
|--|---------------|--------------------------|--|----------|--|
| 1 - North Sutherland (cont'd) | C10340030 | LEACACH | Point piers and abutments. New invert required | | |
| | U16310010 | RHIAN | Repair training walls, patch road | | |
| | U16310020 | KINLOCH | Offlets and minor pointing | | |
| | U16310029 | ACHSTRATHAN | Point abutments and pier, repair training wall | | |
| | U16310040 | GARBHALLT | Remove trees, repair training walls | | |
| | | | | | |
| 1 - West & Central Sutherland | A08360090 | BONAR BRIDGE | Repairs required to parapets due to accident damage | | |
| | A08360150 | DALNESSIE | Add rock armour to base of damaged embankment | | |
| | A08370180 | INVER | Repairs required to parapets due to accident damage | | |
| | A08940030 | KYLESKU | Remove corrosion to bearings, replace waterproofing to deck and further inspection to expansion joints | | |
| | B08640010 | ACHANY FORESTRY | Remove staining, stalactites and determine the effectiveness of the current drainage system | | |
| | B08690010 C39 | PHLAING | Replace failed deck slab | | |
| | B08690030 | CULKEIN | Replace pipe at span 1 | | |
| | B08690050 C06 | UNNAMED | Concrete repairs to be made to face at upstream end | | |
| | C10030010 C69 | STRATHAN | Further inspection to steel joists | | |
| | C11360050 | CULRAIN RAIL | Repairs to be made to parapets/safety fence due to accident damage | | |
| | C11380010 | CULEAVE RAIL BRIDGE | Repairs to be made to parapets/safety fence due to accident damage | | |
| | U10610010 | CHAMAIS | Parapet remedial works. | | |
| | U11430000 C62 | FHEARNA | Clear invert of debris | | |
| | U19910010 | REDBURN | Repairs required to parapets due to accident damage | | |
| | U20820010 | CULBUIE | Repairs or replacement of parapets | | |
| | U21170060 | LANGWELL PLANTATION | Repairs or replacement of parapets | | |
| | U35390010 | LAIRG RAIL (CNOC SOLAIR) | Update signage to metric and replace existing signs | | |
| | | | | | |

| Ward | Bridge Code | Bridge Name | Description of Works | |
|---|--------------------|---------------------|--|--|
| 1 - West & Central Sutherland (cont'd) | General | CATTLE GRIDS | Cattle grids at various locations are currently being assessed to identify those requiring work during 2013/14. | |
| | General | GENERAL MINOR WORKS | The works listed above have been identified as the most important/urgent. Depending on progress with some of the more significant projects, other less urgent minor works may be added to the programme. | |
| | | | | |
| 5 - East Sutherland & Edderton | A08390030 | BLARICH | Repairs or replacement of parapets | |
| | U22420020 | DALMORE RAIL | Repaint faded white chords and black and yellow arch ring. Update signage to metric. | |
| | U22770010 | PITTENTRAIL | Replace bolt on bearing at abutment 2 | |
| | General | CATTLE GRIDS | Cattle grids at various locations are currently being assessed to identify those requiring work during 2012/13. | |
| | General | GENERAL MINOR WORKS | The works listed above have been identified as the most important/urgent. Depending on progress with some of the more significant projects, other less urgent minor works may be added to the programme. | |
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