



**RHONDDA CYNON TAF COUNTY BOROUGH COUNCIL**

**MUNICIPAL YEAR 2023/24**

**COUNCIL**

**14<sup>th</sup> JUNE 2023**

**FLOOD RISK AND INFRASTRUCTURE UPDATE FOLLOWING STORM  
DENNIS IMPACTS OF FEBRUARY 2020**

**REPORT OF THE DIRECTOR – FRONTLINE SERVICES, IN DISCUSSIONS  
WITH THE RELEVANT PORTFOLIO HOLDER, THE LEADER OF THE  
COUNCIL (CLLR A MORGAN OBE)**

**Author:** Roger Waters, Director – Frontline Services

**1. PURPOSE OF THE REPORT**

1.1 The purpose of the report is to:

- (i) Update members on the Council's actions to mitigate flood risk since Storm Dennis, together with an overview of works undertaken to replace and upgrade flood affected public infrastructure. This short report will be supported by a presentation to members.

**2. RECOMMENDATIONS**

2.1 It is recommended that Council notes the content of the report and the presentation.

**3. REASONS FOR RECOMMENDATIONS**

3.1 To update members on the work that has been ongoing in response the devastation caused by Storm Dennis, including progress against the actions set out in the report of the Chief Executive to Cabinet on 18<sup>th</sup> December 2020. [Report.pdf \(moderngov.co.uk\)](#)

**4. BACKGROUND**

4.1 During February 2020, Wales was hit by four major storms:

- Storm Ciara – 8 – 9 February 2020;
- Storm Dennis – 15 – 17 February 2020;
- Unnamed Storm – 21 – 24 February 2020;
- Storm Jorge – 28 February – 1 March 2020.

- 4.2 The devastation caused by these storms, which combined to generate the wettest February on record, is unprecedented in RCT, with around 1500 residential and business premises suffering from fluvial and pluvial flooding.
- 4.3 The report to Cabinet, referred to above, followed a report to Council on 25 November 2020, which covered the reports published by Natural Resources Wales in response to the flood events. [Report.pdf \(moderngov.co.uk\)](#)
- 4.4 The Chief Executive's report set out eleven recommendations and progress against these recommendations is updated via the Council's quarterly Performance Reports. For ease of reference, an overview of progress more specific to Frontline Services is included at Appendix 1.
- 4.5 In addition, and in accordance with the Flood and Water Management Act 2010, RCT as Lead Local Flood Authority (LLFA) has produced Section 19 Reports on all applicable flood incidents. Further information is available online and these reports have been subject to the Council's Scrutiny processes. [Flood Investigation Reports | Rhondda Cynon Taf County Borough Council \(rctcbc.gov.uk\)](#)
- 4.6 The response to the physical impacts of the storms on our civil infrastructure has been wide ranging and substantial, but it is acknowledged that much more work is needed to reduce the risk of flooding and it is further acknowledged that it is not possible to eliminate the risk of flooding.
- 4.7 The scope of the response has extended across water courses, culverts, river walls, bridges, highway drainage, landslips, coal tips and highways reconstruction. Funding has been secured from a number of sources including directly by RCT.

The main external funding sources since Storm Dennis and up to the current financial year are as follows: -

- Replacing and Upgrading Damaged Infrastructure; Direct grant from Welsh Government related to Storm Dennis (£42.419M).
- Flood Risk Management Initiatives; Annual Small Scale and Large Flood Risk Management Grants (£14.343M)
- Upgrading Highways Drainage; Welsh Government Resilient Roads Grant (£4.750M).
- Coal Tip Safety; Welsh Government Annual Coal Tip Safety Grant (£8.707M to the end of 2022/23 with a further £11M anticipated this year)
- The external funding sources above are supported by the Council's own resources as match funding (£2.785M)

- 4.8 The total cost of addressing the physical impacts related to Storm Dennis addressed by external (WG) grant funding is therefore of the order of £84.004M. Whilst the specific Storm Dennis funding programme is concluding, the other programmes will continue year on year.

Appendices 2-4 set out specific detail related to each of the areas of programme expenditure and the associated infrastructure and works.

## **5. FINANCIAL IMPLICATIONS**

- 5.1 This report outlines the programme of public infrastructure works arising directly and indirectly from Storm Dennis and the significant Welsh Government grant funding that has been secured to support these programmes.
- 5.2 Grants related to Flood Risk Management and Resilient Roads schemes are annual Wales-wide grants that involve bid processes that are subject to elements of RCT match funding. Annual Welsh Government grants are also awarded to meet the costs of our Tip Safety programme.
- 5.3 Works to Council buildings affected by flooding, support for businesses and residents, both physical and financial, are outside the scope of this report.

## **6. EQUALITY & DIVERSITY IMPLICATIONS / SOCIO-ECONOMIC DUTY**

- 6.1 The report updates Council on delivery programmes to address the physical impacts of Storm Dennis on public infrastructure and the mitigation of flood risk. The programmes are being delivered in compliance with prevailing legislation.

## **7. WELSH LANGUAGE IMPLICATIONS**

- 7.1 There are no Welsh language implications as a result of the recommendations in this report.

## **8. CONSULTATION / INVOLVEMENT**

- 8.1 There are no consultation implications aligned to this report.

## **9. LEGAL IMPLICATIONS OR LEGISLATION CONSIDERED**

- 9.1 The programmes highlighted in this report are being delivered in accordance with relevant prevailing legislation.

## **10. LINKS TO CORPORATE AND NATIONAL PRIORITIES AND THE WELL-BEING OF FUTURE GENERATIONS ACT**

- 10.1 This investment programme supports the Council's Corporate Plan Priority 'Places – Where people are proud to live, work and play'.

## **11. CONCLUSION**

- 11.1 This report sets out the programmes of work undertaken to rectify the damage done by the unprecedented storm events of February 2020, together with the programmes being delivered by Flood Risk Management to mitigate the risks of future flood events.

- 11.2 The amount of work undertaken is amplified in the accompanying presentation to Council. The repair and upgrade works will conclude during the current financial year.
- 11.3 Due to our unique topography and geography, RCT has the highest risk of surface water flooding of all local authorities in Wales, so we recognise the programmes of work related to Flood Risk Management will need to continue to move forward at pace.
- 11.4 The work undertaken in repairing and upgrading public infrastructure, together with the ongoing FRM programmes have, and will continue, to reduce flood risk across the county borough. However, it must be emphasised that we cannot eliminate flood risk.
- 11.5 It is therefore imperative that other complimentary actions continue, as set out in Appendix 1, and wider measures to reduce the impacts of Climate Change continue to be prioritised.

## **Appendix 1; Progress on Recommendations Arising from the Report to Cabinet of 18 December 2020**

At its meeting on 18 December 2020, Cabinet received a report comprising an overview of the Council's response to Storm Dennis. At this meeting, Cabinet agreed a series of recommendations to enhance the Council's short and long term responses to extreme weather events and which limit the impact of flooding on those communities most at risk. Since then, the Council's progress in implementing the recommendations has been considered by Cabinet as part of the Council's quarterly performance reports and scrutinised by Overview and Scrutiny Committees [Q3 for illustrative purposes](#). Progress and Risk Controls have also been reflected in the Council's Strategic Risk Register, [Q3 for illustrative purposes](#). These reports are separate to the standalone Flood Risk reports considered by Cabinet e.g. the review of the Local Flood Risk Management Strategy in [November 2022 and](#) by Overview and Scrutiny Committee which recently considered the Audit Wales national report 'A Picture of Flood Risk Management' [at its meeting in March 2023](#).

This focus by officers, elected Members and partners in Welsh Government and Natural Resources Wales has enabled significant progress in delivering the plan emerging from the recommendations since 2020 which has been robustly monitored and scrutinised. High level progress on recommendations actioned by Frontline Services includes

- Putting in place a Strategic Flood Risk Board, chaired by the Council's Leader and comprising representatives from the Council, Natural Resources Wales and Welsh Government. The Board provides the direction in the collaborative approach to meet the immediate and ongoing challenges associate with flood risk.
- Completing all [Section 19 Flood Investigation reports](#) pertaining to Storm Dennis. The flood investigation reports highlight high flood risk residential and industrial areas, information on the flooding/rainfall event, findings and recommended long term alleviation and mitigation actions.
- Putting in place a new Flood Support Team comprising of an Enforcement Officer and a Flood Risk Awareness and Support Officer to support landowners, residents and businesses in high-risk flood areas.
- Increasing the number of staff in our Pluvial Drainage Team, from 20 to 34.
- Completing 65 projects or major project stages in flood alleviation works between 2021 and 2023. The £10.33M investment in this work was funded by a combination of the Council, Welsh Government Flood and Coastal Erosion Risk Management (WG F and CERM) grants and the Welsh Government Resilient Roads Fund.
- Achieving 'Approval in Principle' (AIP) of 15 major project stages for works in 2023/24, as a part of the [Welsh Government Flood and Coast Erosion Risk Management Programme](#). The value of these 15 project stages is £3.765M. AIP has also been approved for 13 Small Scale schemes totalling £1.151m. Resilient Roads Fund has been confirmed

at £0.9M and RCT funding at £0.75m. The total investment for 2023/24 is estimated at £6.566M.

- Completing 332 Flood Resilience Projects for residential properties in flood high risk areas between 2021/23.
- Putting in place an [Emergency Control Centre](#) (ECC) to support the coordination of timely, accurate information and data that informs critical strategic and operational decisions emerging from a monitoring network of 42 locations. Each location has either CCTV, telemetry sites, or both, installed which provide information on water levels of key culverts, outlets and other drainage systems. The equipment at the locations now includes 38 cameras, 31 telemetry sites and 7 rain gauges.
- Maintaining and optimising key infrastructure across the County Borough in the event of other extreme weather events. Work to maintain and further enhance current infrastructure is ongoing as part of service delivery arrangements.
- Including natural flood management arrangements within the Council's Climate Change Strategy '[Think Climate RCT](#)' agreed by Cabinet in June 2022.

All actions set out within the Plan in 2020 for Frontline services have now been completed and/or overtaken by events.

Increased resources are in place to help to tackle the expected extreme weather events in the short and longer term, the focus on technology and infrastructure to prevent and minimise the significant impact arising from flood events, stronger collaboration with partners to manage and mitigate the risks and the increased involvement of residents and communities whose voices have helped to shape our work and future plans.

Management, adaptation and mitigation of flood risk remains a priority for the Council. The response to extreme weather events will remain on the Council's Strategic Risk Register for 2023/24 and beyond.

Further, since the original plan was agreed by Cabinet in 2020, the Council has agreed its Climate Change Strategy '[Think Climate RCT](#)'. Among other things, this Strategy acknowledges the changes in weather that will impact on the environment and ecosystems within RCT and puts in place our commitments to minimise flood risk and put in place green infrastructure and nature based solutions that will increase flood defences and support the management and minimisation of flood risk.

As reported to [Cabinet in November 2022](#), the development of a revised Local Flood Risk Strategy and Action Plan is now in progress and be published to meet the revised Welsh Government deadline of March 2024. '[Think Climate RCT](#)' will be central to its development.

**Appendix 2; Flood Risk Management Programme (including Major Schemes Pipeline, Small Schemes and Resilient Roads Schemes)**

| Scheme/Location                       | Activity/Work   | Number of Schemes completed per Financial Year |             |             |            |
|---------------------------------------|---|--|-------------|-------------|------------|
|                                       |   | 2020 - 2021                                    | 2021 - 2022 | 2022 - 2023 | 2023- 2024 |
| Flood Risk Management – Major Schemes | OBC/BJC/FBC & Works (15% Match Funding)                                       | 0  | 3           | 11          | 19         |
| Small Scale Projects                  | Detailed Design & Construction project < £200k                                | 15   | 19          | 15          | 13         |
| Resilient Road Grant                  | Detailed Design & Construction related to Transport infrastructure resilience | 34   | 11          | 9           | 11         |
| <b>Total</b>                          |   | <b>49</b>                                      | <b>33</b>   | <b>35</b>   | <b>43*</b> |

\*in progress.

**Flood Risk Management - Major Schemes – WG Pipeline for Grant**

| <b>Scheme</b>                     | <b>Location</b>      | <b>Activity/Work (2022/23)</b><br>BJC = Business Justification Case<br>OBC – Outline Business Case<br>FBC- Full Business Case | <b>Current Status</b> |
|-----------------------------------|----------------------|---|-----------------------|
| Peat Bogs Restoration             | Treherbert           | BJC Development and Optioneering  | Completion 23/24      |
| Glenboi Pumping Station           | Mountain Ash         | FBC – Construction  | Ongoing               |
| Nant Gwawr (Phase 2)              | Aberaman North       | OBC Development– Preliminary Design & Development.  | Ongoing               |
| Oakland Terrace                   | Cilfynydd            | OBC Development– Preliminary Design & Development.  | Ongoing               |
| Abertonllwyd Road                 | Treherbert           | OBC Development– Preliminary Design & Development.  | Ongoing               |
| Pentre FAS                        | Pentre               | OBC Development– Preliminary Design & Development.  | Ongoing               |
| Treorchy FAS - (Phase 2)          | Treorchy             | FBC - Detailed Design and Development   | Commencing 23/24      |
| Cwmaman Phase 2                   | Aberaman South       | Full BJC - Construction   | Commencing 23/24      |
| Pentre FAS                        | Pentre               | FBC - Detailed Design and Development   | Commencing 23/24      |
| Turberville Rd - Porth            | Porth                | Full BJC - Detailed Design and Development  | Commencing 23/24      |
| Maes y Ffynon FAS                 | Aberaman North       | Full BJC - Detailed Design and Development  | Commencing 23/24      |
| Nant Gwawr (Phase 2)              | Aberaman North       | FBC - Detailed Design and Development   | Commencing 23/24      |
| Abertonllwyd Road                 | Treherbert           | FBC - Detailed Design and Development   | Commencing 23/24      |
| Cwmbach Canal FAS                 | Cwmbach              | OBC Development– Preliminary Design & Development.  | Commencing 23/24      |
| Trehafod FAS                      | Trehafod             | OBC Development– Preliminary Design & Development.  | Commencing 23/24      |
| Cefn Pennar Road - FAS            | Cwmbach              | BJC - Preliminary Design & Development.   | Commencing 23/24      |
| Gwernifor And Kingscraft St - FAS | Mt Ash               | Full BJC - Construction   | Commencing 23/24      |
| Tirfounder/Bro Teg Road - Phase 2 | Cwmbach              | Full BJC - Construction   | Commencing 23/24      |
| Arfyn Terr, Tylorstown - FAS      | Tylorstown & Ynyshir | FBC - Detailed Design and Development   | Commencing 23/24      |



|   |                |  |                 |
|---|----------------|--|-----------------|
| Afon Cynon/Wellington St                | Aberdare       | OBC Development– Preliminary Design & Development.   | Completed 22/23 |
| Afon Cyno/Wellington St                 | Aberdare       | FBC - Detailed Design and Development                | Completed 22/23 |
| Upper Bronallt Terrace                  | Aberaman       | FBC - Detailed Design and Development                | Completed 22/23 |
| Upper Bronallt Terrace                  | Aberaman       | FBC - Construction                                   | Completed 22/23 |
| Treorchy FAS - (Phase 2)                | Treorchy       | OBC Development– Preliminary Design & Development.   | Completed 22/23 |
| Treorchy FAS - (Phase 1)                | Treorchy       | FBC BJC - Construction                               | Completed 22/23 |
| Cwmaman Phase 2                         | Aberaman South | OBC Development– Preliminary Design & Development.   | Completed 22/23 |
| Cwmaman Phase 2                         | Aberaman South | FBC - Detailed Design and Development                | Completed 22/23 |
| Glenboi Pumping Station                 | Mountain Ash   | FBC – Detailed Design and Development                | Completed 22/23 |
| Turberville Rd - Porth                  | Porth          | BJC - Development– Preliminary Design & Development. | Completed 22/23 |
| Maes y Ffynon FAS                       | Aberaman North | BJC - Development– Preliminary Design & Development. | Completed 22/23 |
| Park Lane FAS                           | Trecynon       | Full BJC - Detailed Design and Development           | Completed 21/22 |
| Park Lane FAS                           | Trecynon       | Full BJC - Construction                              | Completed 21/22 |
| Upper Rhondda Strategic Flood Risk Area | RCT            | OBC Development– Preliminary Design & Development.   | Completed 21/22 |

**Small Scale Projects <£200k Individual Flood Alleviation Schemes (FAS)**

| Scheme   | Location             | Activity/Work  | Current Status   |
|--|----------------------|--|------------------|
| Jones Street - Culvert Relining                      | Treorchy             | Construction Phase   | Commencing 23/24 |
| Dyffryn Road   | Mt Ash               | Construction Phase   | Commencing 23/24 |
| Telemetry  | Various              | Expansion of the Ordinary watercourse Telemetry across RCT | Commencing 23/24 |
| Nant Cae Dudwg - Inlet Upgrade                       | Cilfynydd            | Construction Phase   | Commencing 23/24 |
| Nant Y Fedw - Scour Repair                           | Abercynon            | Construction Phase   | Commencing 23/24 |
| Baglan Street - Culvert Relining                     | Treorchy             | Construction Phase   | Commencing 23/24 |
| Afryn Terrace  | Ferndale             | Construction Phase   | Commencing 23/24 |
| Heath Terrace (Central Inlet) – <b>(Design Only)</b> | Ynyshir              | Detailed Design Phase                                      | Commencing 23/24 |
| Penrhys Rd   | Ystrad               | Detailed Design Phase                                      | Commencing 23/24 |
| Brook Street – Blaenrhondda                          | Treherbert           | Detailed Design Phase                                      | Commencing 23/24 |
| Victor Street - Mt Ash                               | Mt ash               | Detailed Design Phase                                      | Commencing 23/24 |
| Tynywaun - Relining                                  | Treherbert           | Detailed Design Phase                                      | Commencing 23/24 |
| Ynyshir Road   | Tylorstown & Ynyshir | Construction Phase   | Commencing 23/24 |
| Bryn Ifor Inlet Upgrade                              | Mt Ash               | Construction Phase   | Completed 20/21  |
| Plantation Road                                      | Abercynon            | Construction Phase   | Completed 20/21  |
| Cardiff Road, Aberaman                               | Aberaman             | Construction Phase   | Completed 20/21  |
| Campbell Terrace - Mt Ash                            | Mt Ash               | Construction Phase   | Completed 20/21  |
| Granville St -Allen sT mt ash                        | Mt Ash               | Construction Phase   | Completed 20/21  |
| Fernhill Abercwmboi                                  | Fernhill             | Construction Phase   | Completed 20/21  |
| Troed y Rhiw/Fforest Road- Inlet Upgrades            | Mt Ash               | Construction Phase   | Completed 20/21  |
| Victor Street, kingscraft st Mt Ash - inlet          | Mt Ash               | Construction Phase   | Completed 20/21  |

|  |            |                    |                 |
|--|------------|--------------------|-----------------|
| Painters Row, treherbert - Inlet                                 | Ynyswen    | Construction Phase | Completed 20/21 |
| Pentre (Volunteer st) FAS (Advanced Works - Pleasant Street)     | Pentre     | Construction Phase | Completed 20/21 |
| Cwmbach – phase 2  | Cwmbach    | Construction Phase | Completed 20/21 |
| Granville Terr – phase 2   | Mt Ash     | Construction Phase | Completed 20/21 |
| Nant y fedw  | Abercynon  | Construction Phase | Completed 20/21 |
| “Pretty Ponty”   | Pontypridd | Construction Phase | Completed 20/21 |
| Property Flood Resilience Program Phase 1                        | Various    | Construction Phase | Completed 20/21 |
| Pentre (Volunteer st) FAS (Advanced Works - Nant Y Pentre Inlet) | Pentre     | Construction Phase | Completed 21/22 |
| Allen St, Mt Ash   | Mt Ash     | Construction Phase | Completed 21/22 |
| Mt Ash A4059 Upper catchment scour                               | Mt Ash     | Construction Phase | Completed 21/22 |
| Heath Terrace  | Ynyshir    | Construction Phase | Completed 21/22 |
| Turberville Rd - Porth   | Porth      | Construction Phase | Completed 21/22 |
| Tyn-Y-Wern   | Tonyrefail | Construction Phase | Completed 21/22 |
| Standard View  | Ynyshir    | Construction Phase | Completed 21/22 |
| Nant Cae Dudwg   | Cilfynydd  | Construction Phase | Completed 21/22 |
| Mostyn Street  | Abercwmboi | Construction Phase | Completed 21/22 |
| Cefn Pennar Road   | Cwmbach    | Construction Phase | Completed 21/22 |
| Abercwmboi - Pit Cottages Inlet                                  | Abercwmboi | Construction Phase | Completed 21/22 |
| Cross street   | Ynyshir    | Construction Phase | Completed 21/22 |
| Glan Ffrwd   | Cymmer     | Construction Phase | Completed 21/22 |
| Royal oak  | Cilfynydd  | Construction Phase | Completed 21/22 |
| Property Flood Resilience Program Phase 2                        | Various    | Construction Phase | Completed 21/22 |
| Trifounder Rd  | Cwmbach    | Construction Phase | Completed 21/22 |
| Monitoring equipment   | Varuous    | Construction Phase | Completed 21/22 |
| Nant Y Fedw  | Abercynon  | Construction Phase | Completed 21/22 |

|   |                |                       |                    |
|---|----------------|-----------------------|--------------------|
| Rhydyfelin                              | Rhydyfelin     | Construction Phase    | Completed<br>21/22 |
| Jones Street - Culvert Relining         | Treorchy       | Detailed Design Phase | Completed<br>22/23 |
| Dyffryn Road                            | Mt Ash         | Detailed Design Phase | Completed<br>22/23 |
| Kingcraft St,                           | Mt Ash         | Detailed Design Phase | Completed<br>22/23 |
| Telemetry                               | Various        | Construction Phase    | Completed<br>22/23 |
| Bryn Tail Rd                            | Rhydyfelin     | Construction Phase    | Completed<br>22/23 |
| Cae Felin Parc West                     | Hirwaun        | Construction Phase    | Completed<br>22/23 |
| Baglan St                               | Mt Ash         | Construction Phase    | Completed<br>22/23 |
| Masefield Way                           | Rhydyfelin     | Construction Phase    | Completed<br>22/23 |
| Tanycoed Tce                            | Aberaman South | Construction Phase    | Completed<br>22/23 |
| Cemetery Rd, Glynaff                    | Treforest      | Construction Phase    | Completed<br>22/23 |
| Gwernifor St, Mt Ash                    | Mt Ash West    | Detailed Design Phase | Completed<br>22/23 |
| Nant Y Fedw                             | Abercynon      | Construction Phase    | Completed<br>22/23 |
| Pentre - Structural Renovation/Relining | Pentre         | Construction Phase    | Completed<br>22/23 |
| Brynhyfred Street                       | Ynyswen        | Construction Phase    | Completed<br>22/23 |
| Quarry Road                             | Pontypridd     | Construction Phase    | Completed<br>22/23 |

---

**Resilient Road Grant - Alleviate the effects of climate change (flooding) on transportation infrastructure**

| <b>Scheme</b>                    | <b>Location</b> | <b>Activity/Work</b>  | <b>Current Status</b> |
|----------------------------------|-----------------|-----------------------|-----------------------|
| Maes y Ffynon /Cardiff Rd,       | Aberdare        | Construction Phase    | Completed 2020-21     |
| Cwmbach Industrial Estate,       | Cwmbach         | Construction Phase    | Completed 2021-22     |
| Aberdare Bypass                  | Aberdare        | Detailed Design Phase | Completed 2020-21     |
| Aberdare - Asda Roundabout       | Aberdare        | Detailed Design Phase | Completed 2020-21     |
| Bronallt Terrace - Phase 3       | Abercwmboi      | Construction Phase    | Completed 2020-21     |
| Rhigos Road - Nant Cnapiau       | Rhigos          | Construction Phase    | Completed 2020-21     |
| Rhigos Road - 2 x Culverts       | Rhigos          | Detailed Design Phase | Completed 2020-21     |
| Abercynon Road to A4059 New Road | Abercynon       | Detailed Design Phase | Completed 2020-21     |
| A4059 - Abercynon - Mt Ash       | Abercynon       | Construction Phase    | Completed 2020-21     |
| Bends Low Point (A4059)          | Cwmbach         | Construction Phase    | Completed 2020-21     |
| Mt Ash Hall (A4059)              | Mt Ash          | Construction Phase    | Completed 2020-21     |
| Build Out, Mt Ash (A4059)        | Mt Ash          | Construction Phase    | Completed 2020-21     |
| Overflow Culvert (A4059)         | Mt Ash          | Construction Phase    | Completed 2020-21     |
| Cynon Valley Monitoring Stations | Various         | Construction Phase    | Completed 2020-21     |
| Nant y Ffrwd (A4059), Mt Ash     | Mt Ash          | Construction Phase    | Completed 2020-21     |
| Pipe Crossing, Mt Ash (A4059)    | Mt Ash          | Construction Phase    | Completed 2020-21     |

|   |            |                       |                   |
|---|------------|-----------------------|-------------------|
| Plantation Road, Abercynon                            | Abercynon  | Construction Phase    | Completed 2020-21 |
| Mount Street, Aberaman                                | Aberaman   | Construction Phase    | Completed 2020-21 |
| A4233 Porth Relief Road, Porth                        | Porth      | Construction Phase    | Completed 2020-21 |
| Nant y Gwyddon Road, Llwynypia                        | Gelli      | Construction Phase    | Completed 2020-21 |
| Tonypandy Bypass A4058 Trealaw R/A- Dinas Rd          | Tonypandy  | Detailed Design Phase | Completed 2020-21 |
| Tonypandy Bypass A4058 Tonypandy R/A- Trealaw R/A     | Tonypandy  | Detailed Design Phase | Completed 2020-21 |
| Tonypandy Bypass A4058 Asda- Tonypandy R/About        | Tonypandy  | Construction Phase    | Completed 2020-21 |
| Ynyshir Cycle Path                                    | Ynyshir    | Construction Phase    | Completed 2020-21 |
| A4119 bypass Ynysgrug roundabout Tonypandy to Coedely | Coed Ely   | Construction Phase    | Completed 2020-21 |
| Mynydd-Yr-Eos Penygraig                               | Penygraig  | Construction Phase    | Completed 2020-21 |
| Rhondda Valley Monitoring Stations                    | Various    | Construction Phase    | Completed 2020-21 |
| A4058 - High Street Treorchy                          | Treorchy   | Construction Phase    | Completed 2020-21 |
| A4058 - Pentre Pump Station Review                    | Pentre     | Detailed Design Phase | Completed 2020-21 |
| Tudor Road, Ton Pentre                                | Ton Pentre | Construction Phase    | Completed 2020-21 |
| Oxford St, Nantgarw - Highway Drain Collapse          | Nantgarw   | Construction Phase    | Completed 2020-21 |
| Maindy Road, Ton Pentre                               | Ton Pentre | Construction Phase    | Completed 2020-21 |
| Rhigos Mt Rd  | Rhigos     | Construction Phase    | Completed 2020-21 |
| Bwlch Mt Rd   | Maerdy     | Construction Phase    | Completed 2020-21 |
| Aberdare - Asda Roundabout                            | Aberdare   | Construction Phase    | Completed 2021-22 |

|   |                 |                       |                   |
|---|-----------------|-----------------------|-------------------|
| Bwllfa Road, Cwmdare  | Cwmdare         | Construction Phase    | Completed 2021-22 |
| Monitoring Stations   | Various         | Construction Phase    | Completed 2021-22 |
| A4058 Pentre Road   | Pentre          | Construction Phase    | Completed 2021-22 |
| A4061 Abertonllwyd Street                                   | Treherbert      | Detailed Design Phase | Completed 2021-22 |
| B4278 Pontypridd Road                                       | Pontypridd      | Construction Phase    | Completed 2021-22 |
| B4278 Cemetery Road, Porth                                  | Porth           | Construction Phase    | Completed 2021-22 |
| A4093 Blackmill Road, Hendreforgan                          | Hendreforgan    | Detailed Design Phase | Completed 2021-22 |
| B4278 Llwyncelyn Road                                       | Porth           | Construction Phase    | Completed 2021-22 |
| Margaret Street, Pontygwaith                                | Pontygwaith     | Construction Phase    | Completed 2021-22 |
| Glenboi Mt Ash, Highway Drainage Improvements (ph1 and ph2) | Mt Ash          | Construction Phase    | Completed 2021-22 |
| Rhigos Road - 2 x Culverts                                  | Hirwaun         | Construction Phase    | Completed 2022-23 |
| A4059 Abercynon - Mt Ash                                    | Mt Ash East     | Construction Phase    | Completed 2022-23 |
| A4061 Abertonllwyd Street                                   | Treherbert      | Construction Phase    | Completed 2022-23 |
| A4059 Aberdare Bypass (Harriet St to Penywaun)              | Aberdare West   | Construction Phase    | Completed 2022-23 |
| B4275 John Street   | Aberaman South  | Construction Phase    | Completed 2022-23 |
| A4061 Rhigos Mountain Road                                  | Treherbert      | Construction Phase    | Completed 2022-23 |
| Lewis Street  | Aberaman North  | Detailed Design Phase | Completed 2022-23 |
| Llanwonno Road  | Ynysir          | Detailed Design Phase | Completed 2022-23 |
| B4278 Gilfach Road  | Tonyrefail West | Detailed Design Phase | Completed 2022-23 |

|                                    |                 |                       |                  |
|------------------------------------|-----------------|-----------------------|------------------|
| A4058 Tonypandy - Porth (RV5)      | Trealaw/Porth   | Construction Phase    | Commencing 23/24 |
| A4058 Tonypandy - Porth (RV4)      | Trealaw/Porth   | Construction Phase    | Commencing 23/24 |
| Lewis Street (New)                 | Aberaman North  | Construction Phase    | Commencing 23/24 |
| St Luke's Road, Llwyncelyn (New)   | Porth           | Detailed Design Phase | Commencing 23/24 |
| Mill Street (New)                  | Tonyrefail East | Detailed Design Phase | Commencing 23/24 |
| Ynyshir Road (New)                 | Ynyshir         | Detailed Design Phase | Commencing 23/24 |
| Llanwonno Road (New)               | Ynyshir         | Construction Phase    | Commencing 23/24 |
| Llwyncelyn Industrial Estate (New) | Porth           | Construction Phase    | Commencing 23/24 |
| Cymmer Road                        | Porth           | Detailed Design Phase | Commencing 23/24 |
| A4058 Trehafod (New)               | Cymmer          | Construction Phase    | Commencing 23/24 |
| B4278 Gilfach Road (New)           | Tonyrefail West | Construction Phase    | Commencing 23/24 |



### Appendix 3; Storm Dennis Infrastructure Repairs/Upgrading

| Storm Dennis Schemes         |            | Status      | Works Year                                  | 23/24 Spend | Comments  |
|------------------------------|------------|-------------|---|-------------|---|
| Hopkinstown Wall Phase 1     | Pontypridd | Complete    |   | -           | Complete  |
| Sion St Wall                 | Pontypridd | Works stage | 2022/23<br>2023/24                          | £7k         | Works nearing completion. Following delay in Cadw approval, river window missed for final small section of repointing. To be completed early 2023 embargo   |
| Berw Rd Wall                 | Pontypridd | Design      | 2023/24                                     | £400k       | Works delayed to 23/24 due to clash with Berw Road (Whitebridge) refurbishment. Works split into 3 zones of priority. Awaiting quotations – 09/06/2023  |
| Tramway Culvert              | Aberdare   | Complete    | 2021/22                                     | -           | Complete  |
| Afon Dar Culvert             | Aberdare   | Complete    | 2021/22                                     | -           | Complete  |
| Ynysangharad Park Cable Stay | Pontypridd | Complete    |   | -           | Highly Commended in ICE awards  |
| Blaencwm River Wall          | Blaencwm   | Works stage | Ph1 20/21<br>Ph2 21/22<br>Scour<br>22/23/24 | -           | Main works complete. Final section of scour to be completed 23/24   |
| Penydarren Tramroad Bridge   | Aberdare   | Works stage | 21/22/23/24                                 | £700k       | Planning and SMC applications submitted. Walters re-engaged for phase 2. Cadw approval in place for phase 2 scheme. Awaiting final costs from Walters and planning approval. Due to restart on site end of June 23. |
| Ynyshir Community Route      | Ynyshir    | Complete    | 2021/22                                     |             | Complete  |
| Footbridge on FP72           | Ynysybwl   | Complete    | 2022/23                                     |             | Complete  |
| Mill Farm Footbridge         | Ynysybwl   | Design      | 2022/23                                     | £15k        | Liaison with Welsh Water undertaking the work. No firm programme date but update received indicates design now moving forward with scheme due early 23/24 financial year.   |
| Gelligaled Park Bridge       | Ystrad     | Works stage | 2022/23/24                                  | £450k       | Scheme awarded to Centregreat. Emergency closure of bridge enacted 15/07/2022 following site visit identified collapsed wingwall section. Bridge reopened   |

|                          |              |                               |  |        |  |
|--------------------------|--------------|-------------------------------|--|--------|--|
|                          |              |                               |  |        | 02/09/2022. Works restarted on site 15/05/2023   |
| Nant Clydach Bridge      | Ynysybwl     | Complete                      | 2022/23                                    |        | Complete.  |
| Gelli Culvert            | Gelli        | Design stage                  | 2023/24                                    | £360k  | Quotations being received for repairs in 23/24   |
| Pontypridd Rd Wall       | Porth        | Ph1 complete<br>Ph 2 complete | Ph1 20/21<br>Ph2 22/23                     |        | Complete   |
| Campbell Terrace Culvert | Mountain Ash | Design stage/Works Stage      | Emergency repairs completed<br>Ph2 - 23/24 | £415k  | Repair scheme being designed focusing mainly on headwall alterations to improve hydraulic performance<br>Culvert barrel stonework repairs awarded to EDS, commencing on site ~ June pending OWC approvals  |
| Maindy St                | Ton Pentre   | Commissioning                 | 23/24                                      | £1.25m | Scheme being designed by Redstart. Tender return date of 13/06/2023  |
| Feeder Pipe Bridge       | Abercynon    | Design stage                  | 23/24                                      | £3.5m  | Demolition 20/21, renewal 23/24, at design stage with SCAPE Framework.   |
| Berw Rd Bridge           | Pontypridd   | Works stage/<br>Design stage  | 22/23 /<br>23/24                           | £2.8m  | Phase 2 Works on site. Larger volumes of parent concrete repairs required causing delays. Latest programme indicates Phase 2 completion late 2023. Phase 3 scheme to be run in parallel to phase 3. CRL picking this up as CE to main scheme. Concrete repairs far in excess of those originally determined causing significant overall delays. All river works awarded to CRL and being mobilised.    |
| Castle Inn Bridge        | Treforest    | Works stage                   | 22/23/24                                   | £4.3m  | Planning and Listed Building Consent obtained. Contract awarded to Knights Brown. Works significantly delayed due to DCWW diversion and issues with temporary works design. Bridge will not be fully demolished in 22/23 but several aspects of scheme to be completed. FRAP approved for early start due to nature of works. Demolition commenced end of April 2023. Overall completion October 2023. |
| Tonypandy River Wall     | Tonypandy    | Works stage                   | 23/24                                      | £930k  | Scheme awarded to Centregreat for summer 23 works. FRAP received and works on site   |

|                                |             |                                  |                        |       |  |
|--------------------------------|-------------|----------------------------------|------------------------|-------|--|
| Nant Gelliwion Bridge          | Pontypridd  | Design stage                     | 22/23/24               | £700k | Design ongoing. Likely now on-site September 23. Tender return date of 09/06/2023  |
| Tynybryn F/Bridge & Culvert    | Tonyrefail  | Ph1 Complete<br>Ph2 Design stage | Ph1 20/21<br>Ph2 23/24 | £3.3m | SCAPE framework scheme. Enabling works to start 1 <sup>st</sup> week of April. Main scheme design in final stages. Main works programmed to start June 2023. Updated estimate increases main works cost ~£350k.  |
| Hopkinstown River Wall Phase 2 | Pontypridd  | Works stage                      | <b>23/24</b>           | £240k | Scheme awarded to Hammonds for summer 23. Works started on site 15/05/2023.  |
| Maerdy Mountain Landslip       | Maerdy      | Complete                         | 21/22/23               | £15k  | Complete.  |
| Gyfeillion Wall                | Hopkinstown | Works stage                      | 23/24                  | £110k | Scour repairs awarded – delayed due to Barry Sidings 3 RW. Updated scour survey following vegetation removal shows concerns over wall. Updated PI completed following veg removal which indicates less concerns than expected. Awarded, existing FRAP in place, works due to commence 12/06/2023 |
| Mill Road Culvert              | Ynysybwl    | Design Stage                     | 23/24                  | £300k | Very difficult to repair – ongoing review of procurement methods. Additional hydrology procured to prove repair method is appropriate. Scheme being compiled for completion in summer 23   |
| Treferrig House Footbridge     | Tonyrefail  | Commissioning Stage              | 23/24                  | £170k | Scheme delayed due to landowner and stakeholder discussions. Plan now agreed by all parties. Works to take place summer 23   |
| Maesy Ffynnon F/Bridge         |             | Complete                         | 22/23                  | £2k   | Works complete   |
| Pantybrad F/Bridge             |             | Works stage                      | 23/24                  | £35k  | Works Awarded. Awaiting update quotation from Hammonds, works summer 23  |
| Cross Street R/Wall            | Ynyshir     | Works stage                      | 22/23                  | £1500 | Main works complete.   |
| Various Scour Repairs          | Various     | Works/Design Stage               | 22/23/24               | £300k | Abercynon Rec Wall – survey complete. Works in 23/24. Awarded to EDS<br>Caroline Street – Awarded. Works complete  |

|                                   |                      |               |          |       |  |
|-----------------------------------|----------------------|---------------|----------|-------|--|
|                                   |                      |               |          |       | Cwm Clydach Bridge – Awarded. Works complete<br>Harcourt Terrace – Awarded. Works in 23/24<br>Miskin River Bridge – Awarded. Works complete<br>Ty Mawr– Awarded. Works complete<br>Manchester Place Culvert - Works complete<br>Playing fields footbridge scour – awaiting quotes<br>Bridge street scour – awaiting quotes |
| Gelli Park River Wall             |                      | Works stage   | 23/24    | £750k | Scheme awarded to Centregreat for summer 23 works. FRAP in place. Works started 15/05/2023   |
| Heol Y Graig Culvert              | Rhigos               | Design Stage  | 22/23/24 | £250k | Clearance works complete. DCWW temporary truss being installed to protect asset prior to start date and during works themselves. OWC approval imminent for main relining works   |
| Llanwonno Road Bridge             | Tylorstown & Ynyshir | Works Stage   | 23/24    | £70k  | Scheme awarded. Works for summer 23  |
| B4273 Ynysybwl River Wall Phase 2 | Ynysybwl             | Works Stage   | 23/24    | £525k | Scheme awarded to DT Contracting. Pre-start meeting ~late May.   |
| Brook Street River Wall           | Porth                | Commissioning | 23/24    | £30k  | Debates with NRW as to needs for permanent FRAP for additional skin of blockwork to substandard  |
| Cynon Trail River Wall            | Mountain Ash         | Works Stage   | 23/24    | £3m   | Works on site  |

## Appendix 4; Coal Tip Safety Programme

| Tip  | Works Description  |
|--|--|
| Tylorstown Landslip Remediation – RH01 Upper Llanwonno Tip | <p>Phase 1 Emergency Drainage Works 2020</p> <p>Phase 2 and 3 removal of landslip material from the river channel and valley floor to Receptor sites A and B 2021</p> <p>Phase 3a – repair to north slope below landslip. Drainage Channel reinstatement and infill to scour channels. Included contractor designed soil nailing and netting. 2022</p> <p>Phase 4 – Remediation of Upper Llanwonno Tip to increase stability factor of safety by removing approximately 150,000 cubic metres of spoil to a new receptor site and reprofiling the remaining spoil on the hillside. Main works commenced in April 2023 after planning permission was granted in October 2022 with completion due Winter 2023.</p> <p>Final stages – permanent uses for receptor sites A and B; setting up management group and long-term management for the hillside and use of receptor site C.</p> |
| RH77 Graig Ddu, Dinas                                      | <p>Site investigation and installation of ground water monitoring instruments, site investigation and geotechnical reporting. Temporary drainage mitigation works and repairs to carriageway. Clearance of local landslip to Vicarage Road. Design ongoing for drainage improvements and ground stabilisation.</p>   |
| RH87 Wattstown Standard Colliery                           | <p>Desk study and review of available information. Facilitated Coal Authority works to install erosion protection to slip surface.</p>   |
| RH03 Wattstown National Tip                                | <p>Drainage maintenance and reinstatement, drainage by-pass installation, monitoring and telemetry installed – two RCT trials, liaised with Coal Authority and Welsh Government on other technology trials. Further design work for further drainage reinstatement and long-term management considerations ongoing.</p>  |
| A, B C and D Tips Maintenance                              | <p>General maintenance and vegetation clearance to re-establish effective drainage infrastructure on a prioritised basis on several tips.</p> <p>Examples of work undertaken include:</p> <p>Flushing out drainage installation on TE03 Albion Colliery Tip</p> <p>Clearing drainage channels on several tips such as RH113 Lewis Merthyr, Trehafod</p> <p>Vegetation clearance on CV129</p> <p>Working on RH04/05 Tonypandy to restore eroded channels after unauthorised use by vehicles caused damage to drainage channels</p>  |

| Tip  | Works Description  |
|--|--|
| Technology   | <p>Use of an automated telemetry system at Graig Ddu Dinas tip have established data critical to the ongoing design of a stabilisation scheme</p> <p>Installation of tilt meters at RH03 Wattstown National</p> <p>Photogrammetry surveys of all C and D tips in 2020 with repeat surveys in 2023 to compare</p> <p>LIDAR surveys – using drones these surveys have obtained very useful information to be used in drainage reviews and stability analysis</p>   |
| <p>Inspections;<br/>Desk studies;<br/>Reviews of information;<br/>Ground Investigation</p> | <p>Regular inspections are undertaken on all Category A, B, C and D tips and a defects sheet established to plan and prioritise works. A tip category review was undertaken in 2021. Desk studies and information reviews have been undertaken on a prioritised basis, this includes for tips such as RH72 at Ynyshir. This work is being used to compile a forward works programme of maintenance, investigations, analysis and monitoring. Ground Investigation has been completed on site at CV63 Cwmbach to enable further analysis of the site.</p> |