

APPENDIX 6: SUMMARY OF 2022/23 WEATHER CONDITIONS

Winter Season Summary 2022-23 and Monthly Reports

Autumn 2022 was very mild across the region. It was 1.5C above the seasonal average. Precipitation was just a touch above normal. Winter 22/23 was near the average as far as the mean temperature was concerned. However, precipitation was below normal at about 70% of the 30-year climatological average.

November 2022

The wet and windy conditions in October, continued into November with temperatures higher than average. Minimum road surface temperatures were in the range PLUS 10.5C to PLUS 7.8C on the first evening of the standby period. Overnight RSTs dropped steadily through the first week until a low of MINUS 1.1C was recorded briefly at Leanach sensor on the morning of 4th November. Temperatures recovered over the next few days in largely cloudy conditions with frequent or persistent rain, with RSTs returning to double figures overnight into 11th Nov. The wet and mild conditions persisted until clearances overnight 20th / 21st allowed RSTs to reach MINUS 1.1C again at Leanach and MINUS 0.5C at Accurrach. A wider frost descended over most rural sites into 22nd with lowest RSTs ranging from MINUS 2.7C Leanach to MINUS 0.2C at Haul Rd. Sub-zero RSTs persisted overnight into 23rd in mainland Northern domains, with MINUS 1.7C Leanach, MINUS 1.5C Blaran to MINUS 1.2C Accurrach. Cloudy conditions with rain, returned from 24th until the end of the month, with a dip to marginal conditions overnight 28th/29th in intermittent clear spells.

December 2022

The first two weeks of December were the coldest start to December since 2010. Argyll was a little drier than average with precipitation amounts that were about 75% of the 30-year normal for the month. It was a little brighter than average with sunshine hours about 130% of normal. December saw a drier, colder easterly flow develop early in the month. This brought an end to the foggy days at the end of November and ushered in a drier, cooler first week of December. RSTs continued above zero for the first three days of December as a result of some residual clouds. However the clouds cleared on the 4th of December and the first full week of December was much brighter. The morning of Sunday December 4th began a colder period for RSTs and they fell below zero through most of the first week of December. In fact they turned quite cold on the morning of Wednesday 7th December with Accurrach, Salachary and Leanach falling to between -5.0 and -6.0C and even colder the following morning at these spots at between -6.0 and -8.0C. Arctic high pressure continued to dominate the weather through the second week. As a result it was even colder. However, it continued dry. RST were well below zero even at low elevations. The coldest nights/mornings were Tuesday night/Wednesday morning and Wednesday night/Thursday morning. Wednesday 14th morning Leanach and Salachary fell to -10.9C and -10.5C respectively. Even low elevation sites such as Lochdon, Mull fell to -5.4C. Similar temperatures were recorded Thursday morning. A band of accumulating snow passed across the region Friday 16th morning. Snow amounts were generally 2 to 5 cm. Localised amounts reached 10 cm. However, this signalled an end to the cold snap of the last couple of weeks. The snow tapered to patchy rain and snow in the afternoon as it turned milder and continued through

Saturday. The rain fell onto sub-zero surfaces in some areas and caused some icy conditions. RSTs began to rise but minimum RSTs continued near to below zero for most sites through the weekend. A strong southerly flow developed Sunday 18th morning and this brought RSTs to near to above zero for all areas Sunday afternoon. This was followed by spells of rain.

The third week of December was dominated by a milder south-westerly flow. There were some rain showers at times. A cooler easterly flow returned by the end of the week and a band of rain moved through. RSTs continued above zero through the week. Christmas Eve day was mild with some rain showers at times. It turned colder later on Christmas day as a cold front crossed the region.

The last week of December started colder with a few snow showers. Tuesday morning was also cold as a ridge of high pressure brought clear skies and light winds to the region. However a band of rain soon moved into the region associated with a milder south-westerly flow. This milder flow continued until the end of the week bringing showers and spells of rain at times. RSTs were above zero. It turned colder during the day, Friday and RSTs fell marginal to below zero in spots to start the last day of the year, Saturday. It was a cloudy day with some patchy light rain in spots. New Years Eve saw some wintry precipitation develop.

January 2023

The first two weeks of the January were mild, followed by a cold spell mid-month. It turned milder, once again, late in the month. Overall, temperatures for the month were near the 30-year average. Precipitation was near the 30-year normal. The first two days of the New Year were bright but cold. RSTs fell widely below zero both mornings. Tuesday night 3rd, saw RSTs fall near to zero widely but it turned milder as showers moved in Wednesday morning. It turned drier with clear spells for the rest of the week as high pressure moved into the region. Minimum RSTs continued to fall near to zero. It turned milder going into the first weekend of the New Year however it was very windy and showers occurred at times. Minimum RSTs were above zero. The second week of January was wet and windy with minimum RSTs above zero, with no pre-treatable hazards forecast. A major change in the weather pattern occurred during the second weekend of January 14th / 15th. A series of cold fronts went through the area ushering a much colder northerly flow that lasted through the third week of January. Accumulating snow was also recorded in places. Saturday 14th was blustery with showers as low pressure passed to the north of Argyll. In the wake of this system a cold front passed through bringing colder air for Sunday 15th. A much stronger cold front went through late Sunday associated with a few wintry showers at low levels and snow showers affecting higher routes. In the wake of this system much colder air moved into the region associated with an arctic air mass. Arctic high pressure dominated the weather through the third week of January bringing dry and cold conditions. However, there was also the odd snow shower. Minimum RSTs fell near to zero every day of this week, even at low level coastal sites.

The coldest nights/mornings were Monday 16th and Tuesday 17th with Leanach and Salachary fell to -7.4C and -7.0C respectively. Even low elevation sites such as Lochdonhead fell to -4.0C. Similar minimum RSTs were recorded Thursday and Friday morning. A milder south-westerly flow developed Saturday 21st and minimum RSTs remained above zero on Sunday morning. The milder conditions continued through the first part of the week. A cold front went through the region Wednesday

25th associated with a band of rain showers. High pressure then dominated the weather through Friday bringing plenty of clear skies and light winds. As a result, minimum RSTs fell near to zero widely through Saturday 28th. A milder south-westerly flow developed Sunday ahead of a weak frontal system and minimum RSTs remained above zero. In the wake of this system it turned blustery and colder for the last few days of January with some showers that that were wintry at higher levels. In addition, minimum RSTs fell widely near to below zero.

February 2023

Overall, it was a quiet month for winter roads. It was very mild with mean temperatures averaging 2 degrees Celsius above the 30-year normal. It was also drier than normal with only 75% of the normal rainfall. February started wet with a mild south-westerly flow. A cold front crossed the region early in the first weekend of the month and Sunday morning 5th saw widespread clear skies and minimum RSTs fell below zero. On the mornings of 4th and 6th RSTs were generally Plus 3 to 4Deg C, however Sunday 5th saw RSTs drop to Minus 3.5C A886 Leanach & A816 Salachray, Minus 2.4C A817 Haul Rd , Minus 2.1 a816 Blaran & A819 Accurrach.

Monday morning was not quite as cold with minimum RSTs falling near to zero only in elevated sites. It turned milder, once again, early into the second week but a strong cold front crossed the region Wednesday night 8th and Thursday morning 9th turned colder with RSTs falling widely close to zero with Leanach , Blaran and Haul Road all recording minor sub-zero 0 to Minus 0.5C RSTs.

A milder southwest flow developed for the weekend and continued for the next couple of weeks. Skies were generally cloudy and there was some rain at times. RSTs were generally above zero, with average overnight lows between Plus 6 and Plus 3 Deg c most nights. There was another brief dip on 17th, with a similar 0 to Minus 0.8C RSTs recorded at Salachry, Leanach and Blaran. The mild conditions continued for most of the last week of February but at the end of the week a colder northerly flow developed, with a range of sub-zero RSTs across the whole region, from Minus 0.4C at Dervaig to Minus 3.9C at Leanach on the morning of 23rd . This trend continued through the weekend 25th to 27th bringing generally clear skies and colder temperatures. Minimum RSTs fell below zero during the weekend and Monday, with a range across all sensors, including urban sites, from Minus 0.3 Deg C to Minus 4.9 DegC . The fair but colder conditions continued until the end of the month and developed further into the first week of March.

March 2023

March started cold as a northerly flow developed across the region. Although it was dry there was variable amounts of cloud. As a result, where skies were clear minimum RSTs fell below zero. This colder weather was just a prelude to the main event which occurred at the beginning of the first full week of March. A strong cold front crossed the region early Monday 6th morning and true Arctic air flooded across the region and remained until the end of the week. Other than the odd snow shower it was dry with plenty of winter sunshine during the day but the nights were clear and cold. Minimum RSTs were well below zero from Tuesday morning through Saturday 11th morning. The lowest RSTs of the week were recorded Wednesday morning at Tyndrum and Blaran at -7.5C and -7.4C respectively. It turned briefly milder early in the second full week of March but a strong cold front crossed the region late Monday

turning rain to snow. Small accumulations occurred on the higher hills. Skies cleared into Tuesday 14th and RSTs fell well below zero. Tuesday / Wednesday was another cold morning as a ridge of high pressure brought clear skies and light winds. A warm front crossed the region late Wednesday 15th associated with a band of rain. This ushered in a period of milder conditions that lasted through the third week of March. It turned sharply colder into the last weekend of March. Saturday 25th saw spells of rain end as a wintry mix over the higher routes on Sunday morning. RSTs became marginal over higher sites but remained above zero elsewhere. Sunday was cloudy and colder with a few rain or wintry showers. Sunday night saw skies gradually clear and RSTs fell widely near to below zero by Monday morning 27th. Monday was dry and bright but Monday night a low-pressure system approached from the west bringing spells of rain and milder temperatures. The wet and milder conditions continued until the end of the month on Friday 31st March.

April 2023

It turned sharply colder into the last weekend of March, but this cold spell was short-lived as it turned milder once again for the end of the month. Overall, April came out near the 30-year average on the main climatologically parameters. The mean temperature came in at around the 30-year average. Precipitation also came in near the monthly average. Sunshine was a little above the 30-year average. April started dry and cool with high pressure dominating the weather. There were a couple of cooler nights but otherwise RSTs were above zero during the first week. The second week of April turned unsettled and colder. There were some wintry showers on some higher elevation sites Wednesday morning 5th. Also, there were multiple nights where minimum RSTs fell marginal to below zero on elevated sites., with A816 Blaran & Salachray, A819 Accurrach and A886 Leanach all recording minimum RSTs between zero and Minus 1C on the morning of Friday 7th. A warm front crossed the region Saturday night ushering in a milder southwesterly flow that continued through the third week of April. Minimum RSTs were predominantly well above zero during the third week, although marginal readings close to Zero were recorded on the mornings of 11th – 13th in North Western sensors including Blaran and Leanach. A strong cold front crossed the region early in the last week of April and it turned sharply colder in the wake of this front. Minimum RSTs fell below zero in elevated sites and marginal to near zero for low levels sites for a couple of nights. Although RSTs of between Zero and Minus 1 were recorded in Northern and Eastern road sensors A817, A886, A819 & A816 on the morning of Tuesday 25th. the surfaces were dry and no hazards were forecast. A milder southerly flow developed by the end of the week and RSTs rebounded to be well above zero for the remainder of the month.