

Interpreting Avalanche Reports

Overview

Avalanche reports are produced daily by SAIS forecasters. SAIS forecasters carry out a hazard evaluation in the field for part of the day, returning to their base in the afternoon, they will then obtain a specific weather forecast from the Met Office and begin the process of constructing the avalanche report for their region. The area forecaster will discuss the situation with other forecasters and the SAIS co-ordinator after which the report is published.

Important Considerations

- Reading one avalanche report will provide insufficient information to enable someone to determine the complete avalanche hazard situation for an area for that day.
- For a complete understanding of the avalanche hazard prior to your day in the mountains or hills, it is important to take into account the snowpack history: reading avalanche reports from the most recent days, and by monitoring snowpack evolution from the start of the winter.
- Avalanche hazard is only one of the factors to consider when venturing into the mountains as a climber, walker, skier or snow boarder. In the decision making process it is important to consider together three important factors: the weather and mountain conditions, individual skill and experience levels, and the type of landscape to be travelled.
- The 'Be Avalanche Aware' process clearly illustrates a simple process mountain users should utilise before and during their winter mountain and hill excursions.

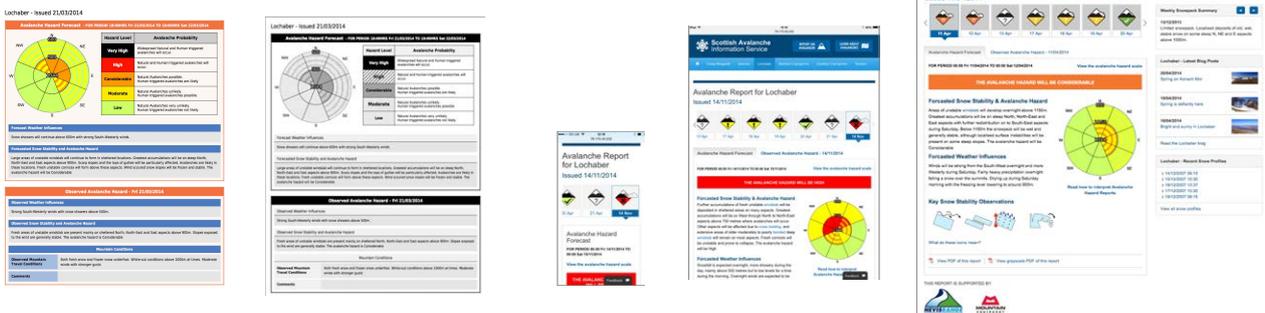


Avalanche report versions

The report is presented in a number of formats, they all have the same content regarding avalanche reports but the online version has interactive elements.

pdf download and email, colour and b&w.

online and mobile digital



Presentation of reports
 PDF download version

The report consists of 4 main sections of information.

A hazard compass rose presenting a visual representation of hazard distribution and altitudes. A chart with display of hazard levels and avalanche probability. Date of issue and period of validity.

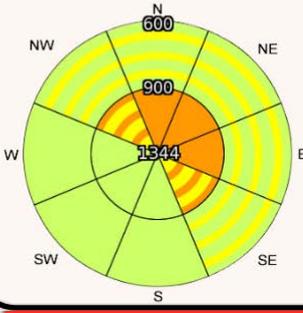
Forecast avalanche hazard text with key weather influences; wind direction, altitude of snow-line, freezing levels and, snow stability and avalanche hazard text section.

Observed avalanche hazard text of the weather conditions experienced by the SAIS forecaster in the field and the avalanche hazard observations obtained during their travel in the landscape.

Text description of the mountain conditions observed by the SAIS forecaster in the field; underfoot conditions, visibility and wind affect on physical progress are recorded. This information is also sent to the met office to enhance weather forecasting and public information. Comments on possible conditions for the next days or information of particular significance may also be written.

Lochaber - Issued 21/03/2014

Avalanche Hazard Forecast - FOR PERIOD 18:00HRS Fri 21/03/2014 TO 18:00HRS Sat 22/03/2014



Hazard Level	Avalanche Probability
Very High	Widespread Natural and Human triggered avalanches will occur.
High	Natural and Human triggered avalanches will occur.
Considerable	Natural Avalanches possible. Human triggered avalanches are likely
Moderate	Natural Avalanches unlikely. Human triggered avalanches possible.
Low	Natural Avalanches very unlikely. Human triggered avalanches not likely.

Forecast Weather Influences
 Snow showers will continue above 600m with strong South-Westerly winds.

Forecasted Snow Stability and Avalanche Hazard
 Large areas of unstable windslab will continue to form in sheltered locations. Greatest accumulations will be on steep North, North-East and East aspects above 900m. Scarp slopes and the tops of gullies will be particularly affected. Avalanches are likely in these locations. Fresh unstable cornices will form above these aspects. Wind scoured snow slopes will be frozen and stable. The avalanche hazard will be Considerable

Observed Avalanche Hazard - Fri 21/03/2014

Observed Weather Influences
 Strong South-Westerly winds with snow showers above 500m.

Observed Snow Stability and Avalanche Hazard
 Fresh areas of unstable windslab are present mainly on sheltered North, North-East and East aspects above 900m. Slopes exposed to the wind are generally stable. The avalanche hazard is Considerable

Mountain Conditions

Observed Mountain Travel Conditions	Both fresh snow and frozen snow underfoot. White-out conditions above 1000m at times. Moderate winds with stronger gusts
Comments	

Online and mobile digital version

1. Area and issue date.
2. Past avalanche reports accessed by scrolling back in time.
3. Snowpack history summaries provide weekly descriptions from the start of the winter. These are published by each area every thursday and provide key snow stability observations. This may be used to determine any persistent factors such as weak layers and/or cornice threat.
4. On online versions either forecast Avalanche Hazard or observed avalanche hazard is displayed. Tabs are used to access one or the other.
5. Forecast snow and avalanche hazard text with tool tip glossary, and hazard compass rose are displayed together to present better interpretation of avalanche hazard distribution.
6. Area blog posts are presented conveniently so that area images and forecaster descriptions can be accessed and used in decision making.
7. Relevant key snow stability observations are highlighted and show the key stability factors or patterns that the forecaster considers are relevant for that day. Use these to determine any persistent hazards.
8. Snowprofiles for current and previous days are available.
9. PDF downloads are available here, colour and B&W.
10. The observed avalanche hazard is accessed via relevant tab.
11. Snowprofile interpretation and archive.
12. Relevant weather forecasts and summit weather info.

1 Avalanche Report for Lochaber
Issued 21/03/2014

2 [Date navigation icons: 19 Mar, 20 Mar, 21 Mar, 22 Mar, 23 Mar, 24 Mar, 25 Mar]

3 Weekly Snowpack Summary
10/04/2014
It has been another week of generally mild conditions. There has been the odd dusting of fresh snow over the summits but overall the snowpack has been thawing at all levels. Stability has been generally good

4 Avalanche Hazard Forecast | Observed Avalanche Hazard - 21/03/2014

5 FOR PERIOD 00:00 Fri 21/03/2014 TO 00:00 Sat 22/03/2014
THE AVALANCHE HAZARD WILL BE CONSIDERABLE

6 **Forecasted Snow Stability & Avalanche Hazard**
Large areas of unstable windslab will continue to form in sheltered locations. Greatest accumulations will be on steep North, North-East and East aspects above 900m. Scarp slopes and the tops of gullies will be particularly affected. Avalanches are likely in these locations. Fresh unstable cornices will form above these aspects. Wind scoured snow slopes will be frozen and stable. The avalanche hazard will be Considerable

7 **Forecasted Weather Influences**
Snow showers will continue above 600m with strong South-Westerly winds.

8 **Key Snow Stability Observations**
[Icons: snowflake, wind, sun, mountain, etc.]
What do these icons mean?
View PDF of this report | View grayscale PDF of this report

9 [Blog posts: 20/04/2014 Spring on Aonach Mor, 19/04/2014 Spring is defiantly here, 18/04/2014 Bright and sunny in Lochaber]

10 **Observed Avalanche Hazard - 21/03/2014**
THE AVALANCHE HAZARD IS CONSIDERABLE

11 **Observed Weather Influences**
Strong South-Westerly winds with snow showers above 600m.

12 **Observed Snow Stability and Avalanche Hazard**
Fresh areas of unstable windslab are present mainly on sheltered North, North-East and East aspects above 900m. Slopes exposed to the wind are generally stable. The avalanche hazard is Considerable

11 [Blog posts: 20/04/2014 Spring on Aonach Mor, 19/04/2014 Spring is defiantly here, 18/04/2014 Bright and sunny in Lochaber]

11 [Recent Snow Profiles: 20/04/2014 12:30, 19/04/2014 11:30, 18/04/2014 12:50, 17/04/2014 12:55, 12/04/2014 11:00]

12 [Weather Links: Met Office West Highlands Mountain Forecast, Ben Nevis Summit Forecast]

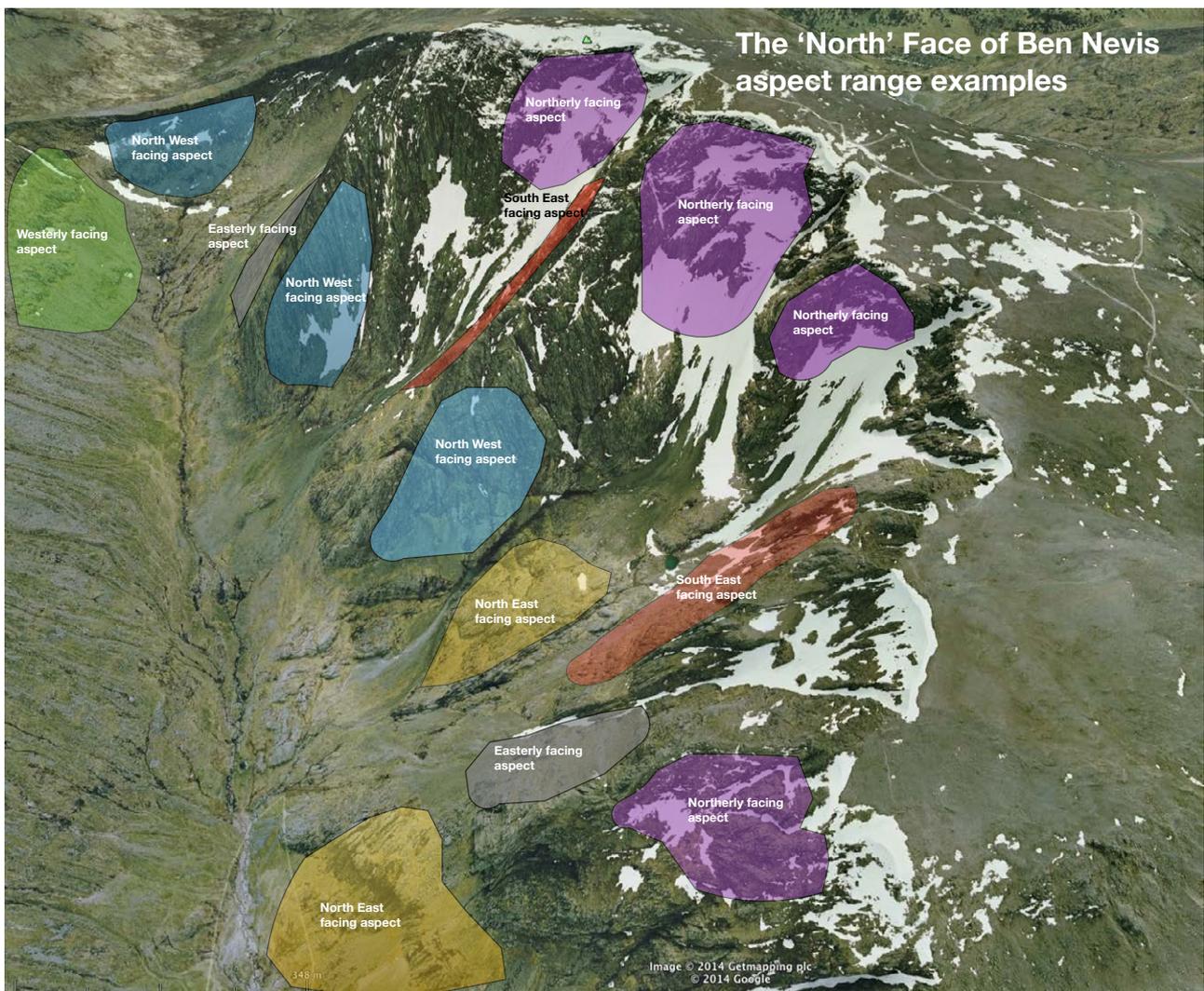
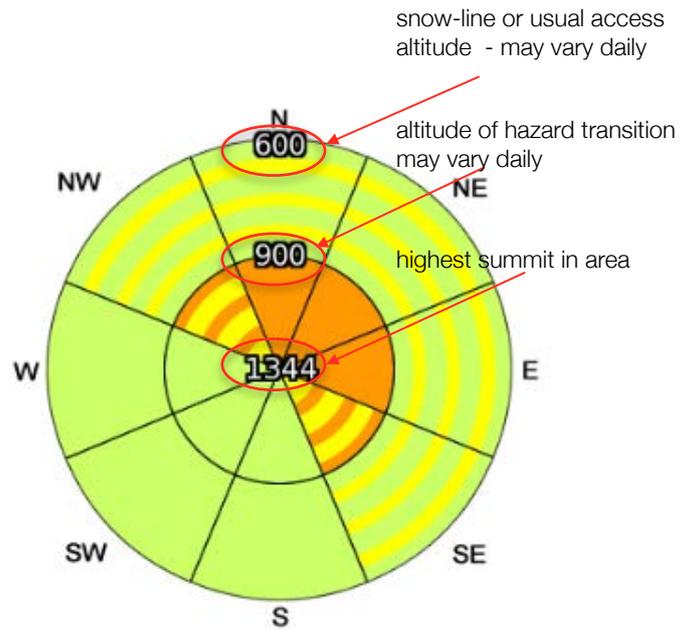
Interpretation of avalanche hazard reports

The hazard compass rose

The hazard rose is a supplement to the text description and should not be used in isolation as it cannot completely portray the situation on the ground.

The distribution of hazard according to aspect and compass direction by forecasters is generally determined by using observations on the ground during field excursions, and weather forecasts.

When using the hazard rose it is important to consider that in any particular mountain area or corrie many aspects may be encountered. eg The North Face of Ben Nevis or the Northern Corries of the Cairngorms contain most aspects in addition to Northerly ones.



Localised hazard

The distribution of snow in our winter landscape is mainly determined by the wind. Areas of wind scoured slopes and ridges and the accumulation of snow into wind sheltered slopes and places presents a situation of great variation. As the snowpack evolves during the winter, layers of snow are built upon by subsequent snow accumulations. This often presents us with a situation where localised weakly bonded areas are distributed in a variety of small locations on an otherwise stable snowpack or often bare ground (see photo). In the photo below even a small avalanche would have serious consequences.



Corrie an t Sneachda, Cairngorms - Localised snowpack and hazard

Localised hazard definition

Hazard is termed 'localised' because of limited snowpack cover and/or weaknesses in the snowpack being confined to small areas which can release as an avalanche with a loading of one person or more. Even small areas, once triggered, can effect the whole slope because of the increased load and produce avalanches of serious consequence and greater size.

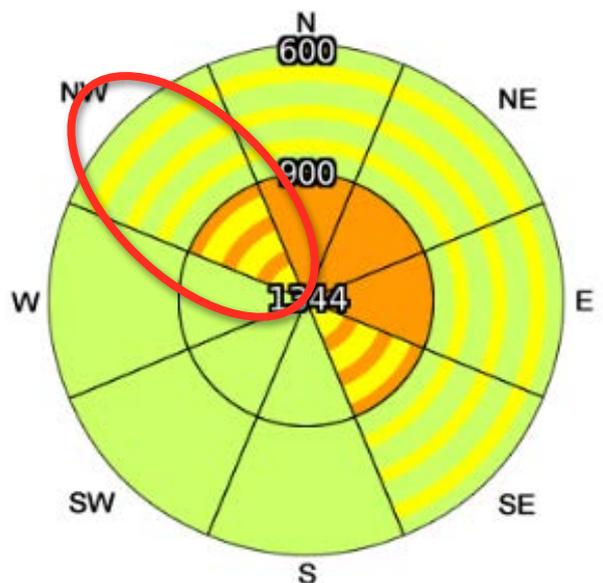
Localised hazard is presented on the hazard rose as illustrated opposite.

Above 600 metres altitude and below 900 metre altitude on north-west through north-east to south-easterly aspects the snowpack has localised areas of moderate hazard.

Above 900 metres altitude on north-west and south-east aspects the snowpack has localised areas of considerable hazard.

On north to east aspects above 900 metres the hazard is considerable.

On all south to west aspects above 600 metres the hazard is low.



Important considerations when interpreting avalanche hazard reports

All avalanche reports require the user to interpret their own observations when travelling in the mountains and to continually assess their encountered situation.

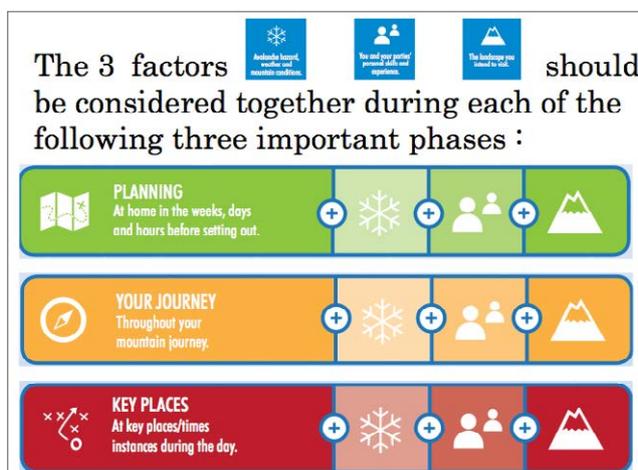
Identifying avalanche hazard in the hills and mountains throughout the winter is a challenging process.

Constantly changing weather factors, from temperature and snowfall to wind speed and direction can affect the strength and stability of the snowpack.

It is important to keep a close watch on conditions during the season and especially throughout any mountain excursions.

It is recommended that as well as avalanche hazard, other factors should be taken account as outlined in the 'Be Avalanche Aware' process.

The planning phase and the information gathered before going into the mountains is the most important and will provide you with 70-80% of your hazard evaluation information.



Other useful information for determining avalanche hazard

The Avalanche Map

Avalanche maps provide up to date information on the location of avalanche activity, providing key information on snow stability in respect of altitudes, aspects, and locations.

They are updated daily by forecasters and from avalanche reports that are provided by the public and provide recent avalanche activity and therefore snow stability information which can be incorporated into any planning.

All avalanche reports are checked before being published to the map.

