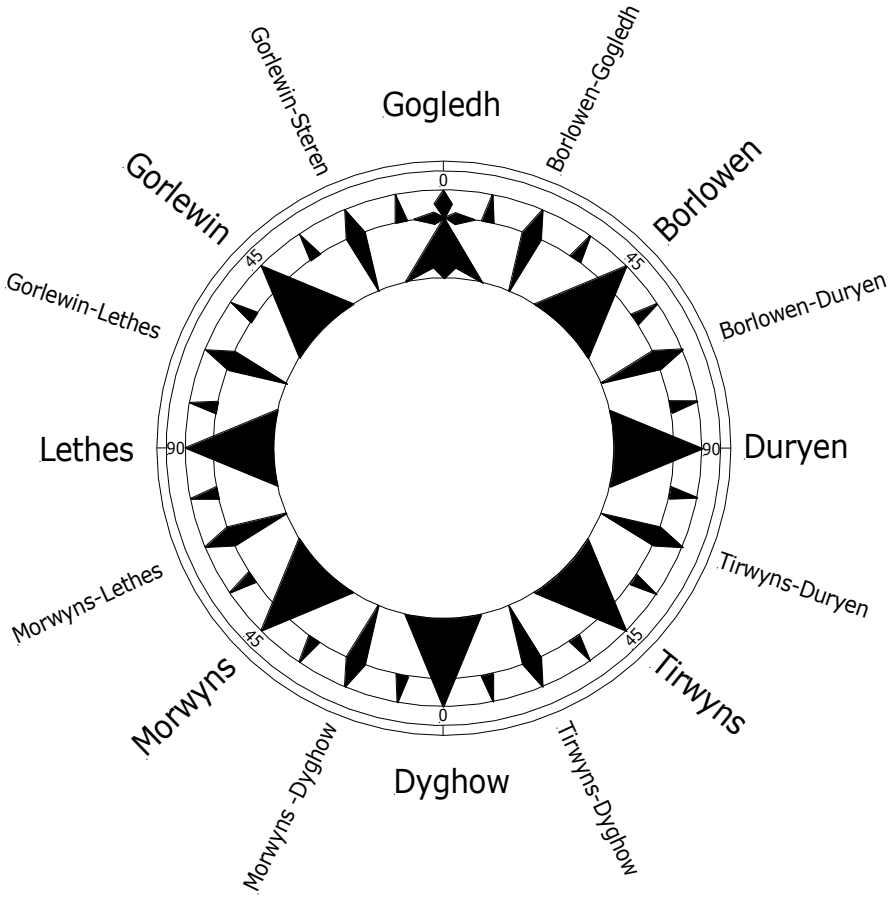
TROHA MORNASWYDH GERNEWEK

TOWARD A CORNISH COMPASS



Kompas Kernewek (16 Poynt)

ROD LYON

Contents

Introduction

During 2013 the Place-name and Signage Panel spent a large amount of time researching and debating the most appropriate Cornish language compass points to use for the purpose of official signage.

Rod Lyon took a lead in the research and produced this marvelous document for discussion purposes within the Panel. In the final analysis the Panel did not adopt the proposal herein, and have adopted the Cornish compass points: North, Est, Soth, West.

With the advent of the Akademi Kernewek and our new website (www.akademikernewek.org.uk), it provides the opportunity to make Rod's fantastic work available to a wider audience.

Nev Meek
Akademi Kernewek
Chair: Place-name & Signage Panel
September 2016

The History of the Compass[1]

The earliest compasses were most likely invented by the Chinese in around 1050 BCE. They were created first for the purposes of spiritual life or developing a *feng shui* environment and then later used for navigation. It is disputed whether other cultures, such as some Mesoamerican societies, may have developed the idea for the magnetized compass first, also in accordance for spiritual aligning and not navigation.

Compasses were originally developed when lodestones, a mineral that has naturally magnetized iron ore, were suspended above a board with the ability to pivot and turn. It was discovered that the stones would always point in the same direction, and align themselves with the north/south axis of the earth.

The Compass Rose

The compass rose is a depiction of orientation and direction that is placed on compasses, maps, and charts. Thirty-two points are depicted around a circle in equal intervals, marking the **four cardinal directions** (N, E, S, W), the **four intercardinal directions** (NE, SE, SW, NW), and the other **sixteen secondary intercardinal directions** (NE by N, N by E, etc.).

The 32 points were originally drawn to indicate winds and were used by sailors in navigation. The 32 points represented the eight major winds, the eight half-winds, and the 16 quarter-winds. All 32 points, their degrees, and their names can be found later in this paper.

On early compass roses, the eight major winds can be seen with a letter initial above the line marking its name, as we do with N (north), E (east), S (south), and W (west) today. Later compass roses, around the time of Portuguese exploration and Christopher Columbus, show a *fleur-de-lys* replacing the initial letter T (for *tramontana*, the name of the north wind) that marked north, and a cross replacing the initial letter L (for *levante*) that marked east, showing the direction of the Holy Land.

Origins of the Compass Rose

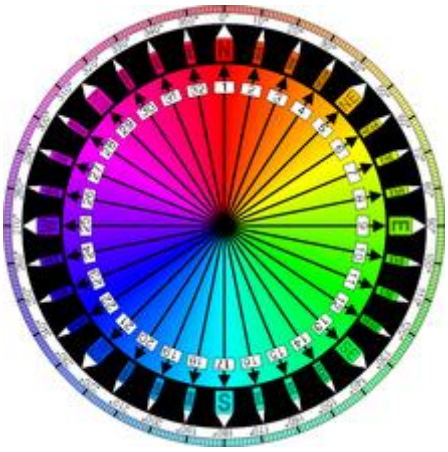
The compass rose has appeared on charts and maps since the 1300's when the *portolan* charts first made their appearance. The term "rose" comes from the figure's compass points resembling the petals of the well-known flower.

In the Middle Ages, the names of the winds were commonly known throughout the Mediterranean countries as *tramontana* (N), *greco* (NE), *levante* (E), *siroco* (SE), *ostro*

(S), *libeccio* (SW), *ponente* (W) and *maestro* (NW). On portolan charts you can see the initials of these winds labelled around the edge as T, G, L, S, O, L, P, and M.

The 32 points are therefore simple bisections of the directions of the four winds, but the Chinese divided the compass into 12 major directions based on the signs of the Zodiac.

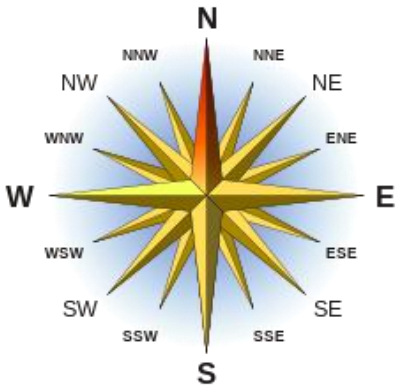
Boxing the compass[2]



Boxing the compass is the action of naming all thirty-two clockwise points in order. The colours on the figure are supposedly the result of the need for graphic clarity rather than a mere cartographical whim. On a rolling ship at night by the light of a flickering lamp, these figures had to be clearly visible. Therefore the eight principle points of the compass are usually shown on the compass rose in black which stands out easily. Against this background, the points representing the half-winds are typically coloured in blue or green and since the quarter-wind points are the smallest, they are usually coloured red.

Compass points

	Compass pt.	Abbr.	Traditional wind point	Degrees E of N
1	**North**	**N**	**Tramontana**	**0.00°**
2	North by east	NbE	Qto Tramontana verso Greco	11.25°
3	North-northeast	NNE	Greco-Tramontana	22.50°
4	Northeast by north	NEbN	Qto Greco verso Tramontana	33.75°
5	**Northeast**	**NE**	**Greco**	**45.00°**
6	Northeast by east	NEbE	Qto Greco verso Levante	56.25°
7	East-northeast	ENE	Greco-Levante	67.50°
8	East by north	EbN	Qto Levante verso Greco	78.75°
9	**East**	**E**	**Levante**	**90.00°**
10	East by south	EbS	Qto Levante verso Scirocco	101.25°
11	East-southeast	ESE	Levante-Scirocco106.88°	112.50°
12	Southeast by east	SEbE	Qto Scirocco verso Levante	123.75°
13	**Southeast**	**SE**	**Scirocco**	**135.00°**
14	Southeast by south	SEbS	Qto Scirocco verso Ostro	146.25°
15	South-southeast	SSE	Ostro-Scirocco	157.50°
16	South by east	SbE	Qto Ostro verso Scirocco	168.75°
17	**South**	**S**	**Ostro**	**180.00°**
18	South by west	SbW	Qto Ostro verso Libeccio	191.25°
19	South-southwest	SSW	Ostro-Libeccio	202.50°
20	Southwest by south	SWbS	Qto Libeccio verso Ostro	213.75°
21	**Southwest**	**SW**	**Libeccio**	**225.00°**
22	Southwest by west	SWbW	Qto Libeccio verso Ponente	236.25°
23	West-southwest	WSW	Ponente-Libeccio	247.50°
24	West by south	WbS	Qto Ponente verso Libeccio	258.75°
25	**West**	**W**	**Ponente**	**270.00°**
26	West by north	WbN	Qto Ponente verso Maestro	281.25°
27	West-northwest	WNW	Maestro-Ponente	292.50°
28	Northwest by west	NWbW	Qto Maestro verso Ponente	303.75°
29	**Northwest**	**NW**	**Maestro**	**315.00°**
30	Northwest by north	NWbN	Qto Maestro verso Tramontana	326.25°
31	North-northwest	NNW	Maestro-Tramontana	337.50°
32	North by west	NbW	Qto Tramontana verso Maestro	348.75°
1	**North**	**N**	**Tramontana**	**360.00°**



A 16-point compass rose

The 32-wind compass card has the addition 'half-points' between all of those shown on 16-point compass shown above

The additional sixteen **quarter winds** bisecting the angles between the points on a 16-wind compass rose are North by east (NbE), Northeast by north (NEbN), Northeast by east (NEbE), East by north (EbN) in the first quadrant, East by south (EbS), Southeast by east (SEbE), Southeast by south (SEbS), South by east (SbE) in the second quadrant, South by west (SbW), Southwest by south (SWbS), Southwest by west (SWbW), West by south (WbS) in the third quadrant, and finally West by north (WbN), Northwest by west (NWbW), Northwest by north (NWbN) and North by west (NbW) in the fourth quadrant.

The **32-wind compass rose**, has each compass direction point at $11^{1}/_{4}°$ angle from the next.

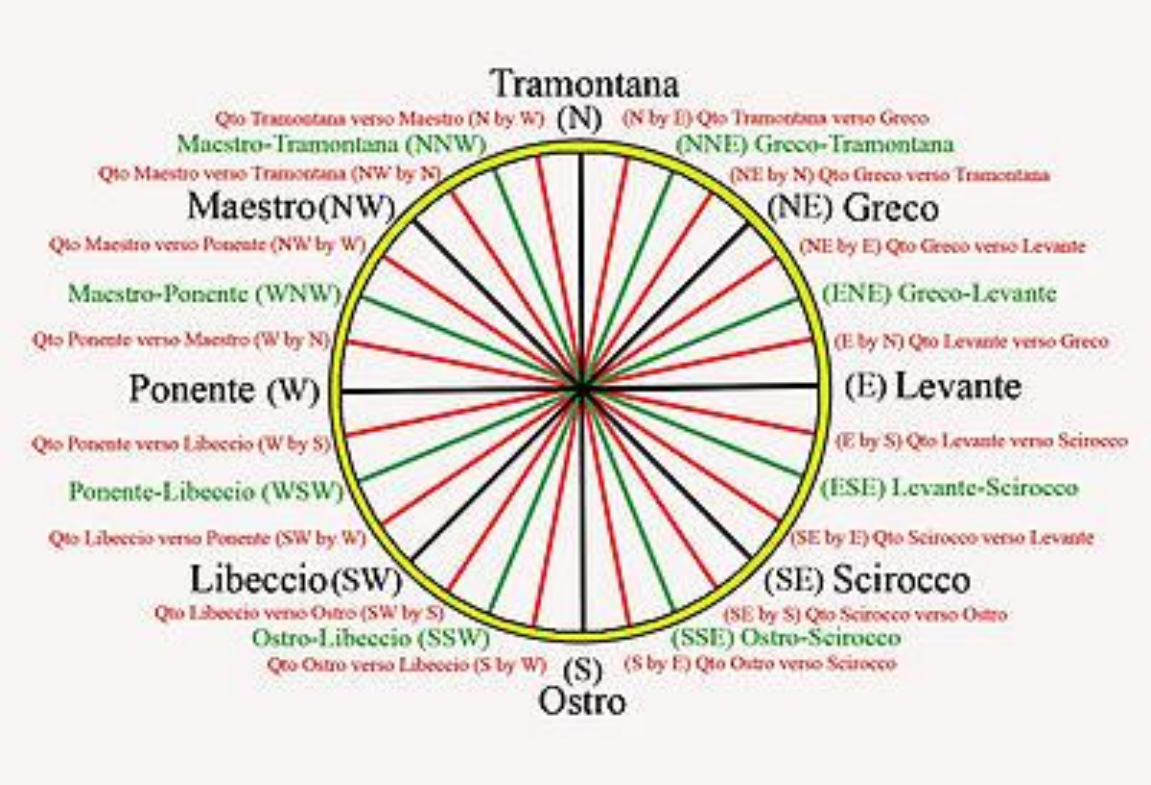
The name of a quarter-wind is typically "X by Y", where X is a principal wind and Y is a cardinal wind.

Traditional names

The traditional compass rose of eight winds (and its 16-wind and 32-wind derivatives) was invented by seafarers in the Mediterranean Sea during the Middle Ages with the ancient Greco-Roman 12 classical compass winds having little to do with them. The traditional mariner's wind names were expressed in **Italian** - or, more precisely, the **Italianate** *Mediterranean lingua franca* common among sailors in the 13th and 14th centuries, which was principally composed of Genoese (*Ligurian*), mixed with *Venetian, Sicilian, Provençal, Catalan, Greek* and *Arabic* terms from around the Mediterranean basin.

The 32-wind compass with traditional names together with their traditional colour code is shown below.

This *Italianate* patois was used to designate the names of the principal winds on the compass rose found in mariner compasses and portolan charts of the 14th and 15th centuries. The "traditional" names of the eight principal winds are shown in bold on the compass below.



Local spelling variations are far more numerous than listed, e.g. Tramutana, Gregale, Grecho, Sirocco, Xaloc, Lebeg, Libezo, Leveche, Mezzodi, Migjorn, Magistro, Mestre, etc. Traditional compass roses will typically have the initials T, G, L, S, O, L, P, and M on the main points. *Portolan* charts also colour-coded the compass winds: black for the eight principal winds, green for the eight half-winds and red for the sixteen quarter-winds.

Germanic origin of names[3]

During the Migration Period, the **Germanic** languages' names for the cardinal directions entered the **Romance** languages, where they replaced the **Latin** names *borealis* (or *septentrionalis*) with north, *australis* (or *meridionalis*) with south, *occidentalis* with west and *orientalis* with east. It is possible that some northern people used the Germanic names for the intermediate directions. Medieval Scandinavian orientation would thus have involved a 45 degree rotation of cardinal directions.

- *north* (Proto-Germanic **norþ-*) from the proto-Indo-European **nórto-s* 'submerged' from the root **ner-* 'left, below, to the left of the rising sun' whence comes the Ancient Greek name **Nereus**

- *east* (**aus-t-*) from the word for **dawn.** The proto-Indo-European form is **austo-s* from the root is **aues-* 'shine (red)'.

- *south* (**sunþ-*), derived from proto-Indo-European **sú-n-to-s* from the root **seu-* 'seethe, boil'. Cognate with this root is the word **Sun,** thus "the region of the Sun."

- *west* (**wes-t-*) from a word for "**evening**." The proto-Indo-European form is **uestos* from the root **ues-* 'shine (red)', itself a form of **aues-*. Cognate with the root are the Latin words *vesper* and *Vesta* and the Ancient Greek *Hestia*, *Hesperus* and *Hesperides*.

Unique (non-compound) names of ordinal directions[2]

In some languages, such as **Finnish, Estonian** and **Breton,** the ordinal directions have names that **are not compounds of the names of the cardinal directions** (as, for instance, *northeast* is compounded from *north* and *east*). In **Finnish** those are *koillinen* (northeast), *kaakko* (southeast), *lounas* (southwest), and *luode* (northwest), and in **Breton** the corresponding points are *biz* (NE), *gevred* (SE), *mervent* (SW) and *gwalarn* (NW). The origins of the Breton words will be examined later in this paper'

History of the 4 Cardinal Points[3]

Linguistic anthropological studies have shown that most human communities have **four points of cardinal direction.** The names given to these directions are usually derived from either locally-specific geographic features (e.g. "towards the hills", "towards the sea") or from celestial bodies (especially the sun) or from atmospheric features (winds, temperature). Most mobile populations tend to adopt sunrise and sunset for East and West and the direction from where different winds blow to denote North and South.

The ancient Greeks originally maintained distinct and separate systems of points and winds. The four Greek cardinal points (*arctos, anatole, mesembria* and *dusis*) were based on celestial bodies and used for orientation. The four Greek winds (*Boreas, Notos, Eurus* and *Zephyrus*) were confined to meteorology. Nonetheless, both systems were gradually conflated, and wind names came to eventually denote also cardinal directions.

Sidereal compass rose[4]

The "sidereal" compass rose demarcates the compass points by the position of **stars** in the night sky, rather than winds. Arab navigators in the Red Sea and the Indian Ocean, who depended on celestial navigation, were using a 32-point sidereal compass rose before the end of the 10th century. In the northern hemisphere, the steady Pole Star (*Polaris*) was used for the N-S axis; the less-steady Southern Cross had to do for the southern hemisphere, as the southern pole star, *Sigma Octantis*, is too dim to be easily seen from Earth with the naked eye. The other thirty points on the sidereal rose were determined by the rising and setting positions of fifteen bright stars of the northern hemisphere.

Reading from North to South, in their rising and setting positions, these are:

Point	**Star**
N	*Polaris*
NbE	"*the Guards*" (*Ursa Minor)*
NNE	*Alpha Ursa Major*
NEbN	*Alpha Cassiopeiae*
NE	*Capella*
NEbE	*Vega*
ENE	*Arcturus*
EbN	*the Pleiades*
E	*Altair*
EbS	*Orion's belt*

ESE *Sirius*
SEbE *Beta Scorpionis*
SE *Antares*
SEbS *Alpha Centauri*
SSE *Canopus*
SbE *Achenar*
S *Southern Cross*

The western half of the rose would be the same stars in their **setting** position. The true position of these stars is only approximate to their theoretical equidistant points on the sidereal compass. As a practical matter, as sometimes these stars were not visible, or too high to be convenient, there were "alternate" stars nearby that could be used instead.

Thoughts arising out of the foregoing for Cornish Compass Points.

The first consideration was to look at the Breton words, to see if they could be related to anything in Cornish. For this the *Lexique étymologique des termes les plus usuels du breton moderne*[5] was examined. Here is a transcript for the eight compass points in Breton:

Biz s.m. N.-E, vent de N.-E, Empr. fr. *bise.*

Réter s.m. orient. ir. *air-ther* id: altéré pour *er-der (?) d'un celt. **aeri-tero-* pour **parei-tero-* <<situé en avant>>, cf gr. *παροι-τερος*, forme comparatif de la prép. Empr. fr. ancien *roide*[3]*.* [the footnote [3] says: prononcer *roued*. et pour le vocalisme comparer *reùstla*.

Gévred s.m. vent de sud-est, mbr. *avel gueffret* <<vent d'ensemble>> pour *queffret* V. sous *kéfret* – Conj. Ern. [Looking under *kéfret* we find that is an adverb meaning 'ensemble',

Kresteiz s.m. midi, sud.

Mervent s.m. vent de sud-ouest. exactement <<le grand vent>> (d'Arb.), ou <<le vent de mer>> (Loth) V. sous *meùr, mor* et *gwent.*

Kornaouek s.m. vent d'puest, ouest: exactement <<le cornant, le vent que joue de la trompe>> dér. de 1 *korn.*[1 *korn* – cornet, horn].

Gwalarn, gwalern, gwalorn s.m. nord-ouest. Empr. fr. *galerne*, lui-même peut-être d'origine celtique – Loth.

Hanternoz, Norz. Strangely there were no entries for these words in the *Lexique* although they appear in current dictionaries, and '*Norz*' was use by the Camaret and Audierne fishermen when the author worked with them.

From the foregoing, it is not apparent why the majority of these words were introduced to represent points of the compass. In the order given above:

'Biz' – North-east. There is nothing to say from where the word originated, but *'bise'* is French for the North wind.

'Réter' – East. This is compared with the Modern Irish *air-ther*, and apparently has the meaning of 'situated forward'. Possibly indicating facing the direction of the rising sun, which was 'in front of them'.

'Gévred'. The "vent d'ensemble" seems to mean –'overall wind' or perhaps 'general wind'. Doubtless in French this has a specific meaning. It might be related to Cornish word 'Kevres'.

'Kresteiz' This is self-explanatory, with 'midi' being mid-day and the due south position of the sun at this time.

'Mervent'. This is French, as can be seen by the meaning given. It is probably the only wind in this area which is distinctive, as it is the predominant wind and does bring bad weather – hence the English term for the seaman's 'Sou-wester.'

'Kornaouek'. This is strange – 'the wind that plays the trumpet or horn'. Further research and discussion would point to this term being the equivalent of Cornish *'Kernewek'*.

'Gwalarn'. Again there is nothing to say from where the word originated.

'*Hanternoz, Norz'.* Although this does not appear in the *Lexique,* the meaning is obvious.

So, where does this leave us with Cornish counterparts?

It is important as far as is practically possible to base the Cornish compass on attested Cornish words and terminology, together with any necessary shortfall being based on the Breton compass.

Thanks for providing the complete 32-point Breton compass rose which has been of considerable help in devising a similar compass for the Cornish one must go to Julyan Holmes.

Three of the **four cardinal directions** (N, E, S), are already attested in Cornish as follows:

North – **Gogledd** – found in *An Gerlyver Meur*[6] by Dr. Ken George, and the *English-Cornish Dictionary*[7] by Prof. Nicholas Williams, together with a further attestation

(thanks to Craig Weatherhill) in the 1613 name of 'Vounder Gogglas', an ancient trackway, forming in part the northern boundary of St. Buryan Parish – hence the name.

East – **Duryen -** also found *An Gerlyver Meur* and as **Dùryan** in *Desky Kernowek*[8] by Prof. Nicholas Williams. Compare 'dwyrain' – 'east' in Welsh.

South – **Dyghow** - found in all dictionaries.

West, the remaining cardinal direction has been discussed thoroughly. *'Gorlewin'* was initially believed to be the appropriate word to 'adopt' for this cardinal point, as it is found historically (see below), but as considered below, implied a more vague 'westerly' direction.

The next obvious consideration was the Breton word *'Kornaouek'*, which as stated above appears to be the same as Cornish *'Kernewek'.* This word is probably appropriate for the Breton compass but not so for the Cornish counterpart.

Looking west from Land's End, a historical and physical feature almost due west is the Seven Stones – an almost completely submerged reef which over the centuries has claimed a vast number of shipwrecks. It is also believed to be the 'lost' and sunken land mass of Lyonesse. In the 17th century it was known in Cornish as *Lethas* and *Lethowsow (Place names in Cornwall and Scilly*[9] (Craig Weatherhill, 2005). Richard Carew's *Survey of Cornwall*[10] (1603) also gives the name as *Lethowsow.*

Lethas in modern standard Cornish would be **Lethes**, and so this seemed an appropriate name for 'West' on the Cornish compass card.

Of the **four intercardinal directions** (NE, SE, SW, NW), only one is currently attested **North-East – Borlowen** – and one - **Gorlewin** – which would seem to have a rather vague 'westerly' direction, but will be here discussed.

Borlowen is found in *An Gerlyver Meur* and attested as 'Vurluan' in the *Tregear Homilies*, 18 line 3. *'Borlowen'* is also the planet Venus when seen as a morning 'star'.

Gorlewin is found in *An Gerlyver Meur* which attributes the source as Lhuyd. It is also included in William Pryce's *Archæologia Cornu-Britannica*[11]*.* 1790, with the entry: "GORLEUEN; – bobl en gorleuen Kernou, *people in the western part of Cornwall*"

It is considered that when comparing *'Gorlewin'* to *'Borlowan'*, there is a connection, and that 'Gorlewin' could be considered to more specifically mean 'North-West' and is therefore attributed to this intercardinal point on the compass card.

The two remaining intercardinal points have had to be created.

For **South-West** reference was made to the Breton Compass, which is **'Mervent'**. This is simply 'sea-wind' and translates into Cornish as **Morwyns**. This name is appropriate

for this point of the compass as it is the prevailing wind coming from the seaward direction. Its significance as the prevailing wind and bringer of bad weather, is found, as stated previously, in the English name for the seaman's protective head gear - the 'Sou-wester.'

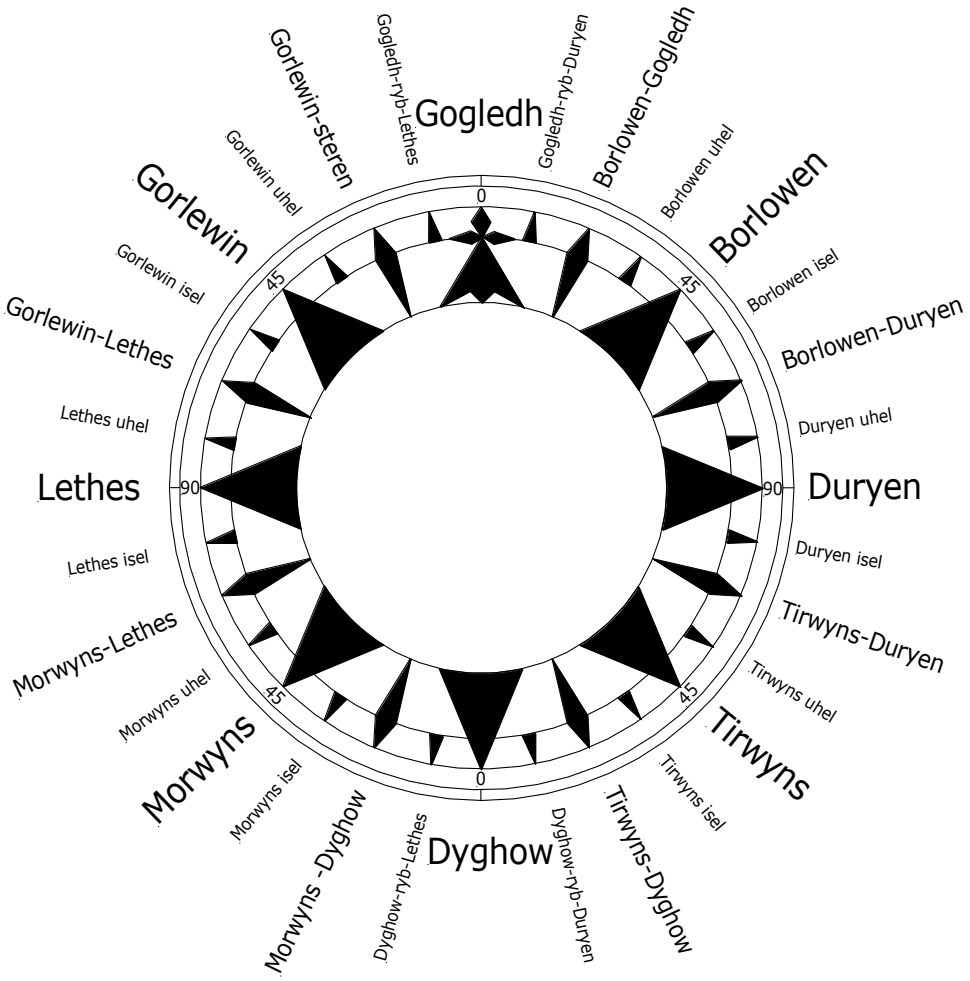
This leaves **South-East.** No traditional word for any wind from a south-easterly direction could be found and so as with North-East and North-West above, a relationship with South-West 'Morwyns' was considered. To the south-east of Cornwall the distinguishing natural features are the Channel and the Continent. With the sea already featured in '*Morwyns'* – 'South-West' – it was considered that the large land mass of the continent should be used and so **Tirwyns** was considered appropriate, as the wind blowing from the large continental land mass.

The remaining points of the Cornish compass follow the pattern of the standard English compass, i.e., **South by West – Dyghow ryb Lethes**, etc., with some minor Breton modifications. One of these modifications has followed the Breton model and has been used for NNW - **Gwener-Steren** - instead of the expected 'Gorlewin-Gogledh'.

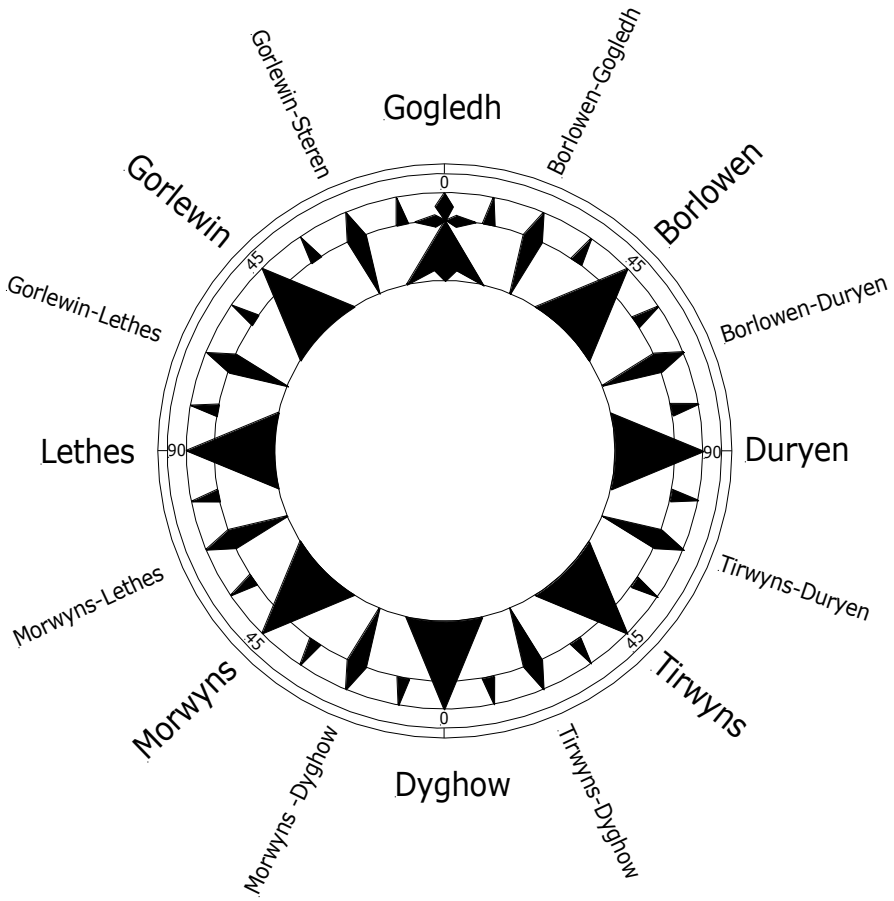
The Breton use of 'Steren' in this point of the compass only is certainly referring to the North Pole Star, which of course is just off the point of true north running through the earth's axis. Being a traditional compass point, this has been carried it over to the Cornish Compass.

A further facet of the Breton Compass card introduced into the Cornish one is the naming of those points which are located immediately adjoining the points: NNE, NE, ENE, E, ESE, SE, SSE, SSW, SW, WSW, W, WNW, NW AND NNW. For example, we see that the English compass rose has between E and ENE the point E by N, and in the Cornish rose the Breton principal has been followed and this point has been called 'Duryen Ughel' – 'High East'. Similarly the corresponding point between E and ESE has been named in the same way, 'Duryan Isel' – 'Low East'.

This is applicable to all those points mentioned in the previous paragraph and are all shown below on the full Cornish Compass, which gives all the 32 points.



Kompas Kernewek (32 poynt)



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Nancegollan

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