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NOTES ON

G.S.G.S. MAPS

OF FRANCE

BELGIUM AND HOLLAND

DECEMBER 1943

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Map samples shown in these Notes do not always do justice to the printed maps they illustrate, detail on printed sheets generally being clearer.

NOTES ON G.S.G.S. MAPS OF FRANCE BELGIUM AND HOLLAND

THE object of these notes is to show what maps are available, or will shortly be so, in this area, to describe the material used for their preparation, and to provide auxiliary information such as glossaries, gazetteers and detailed indices.

It must be emphasised that much of the information given in these notes is accurate only to the date to which it applies, December, 1943, and that, for instance, new series, new editions of sheets or new town plans may be prepared. In general terms, however, the maps mentioned will be those supplied for operational requirements in this area.

Only the main map series are listed below: other less important series are described in the text under their appropriate scale group.

It should be noted that maps of Corsica are considered in "Notes on G.S.G.S. Maps of Italy, Sicily, Sardinia, and Corsica, 1 May, 1943."

DIRECTORATE OF MILITARY SURVEY,
WAR OFFICE,
LONDON.
December, 1943.

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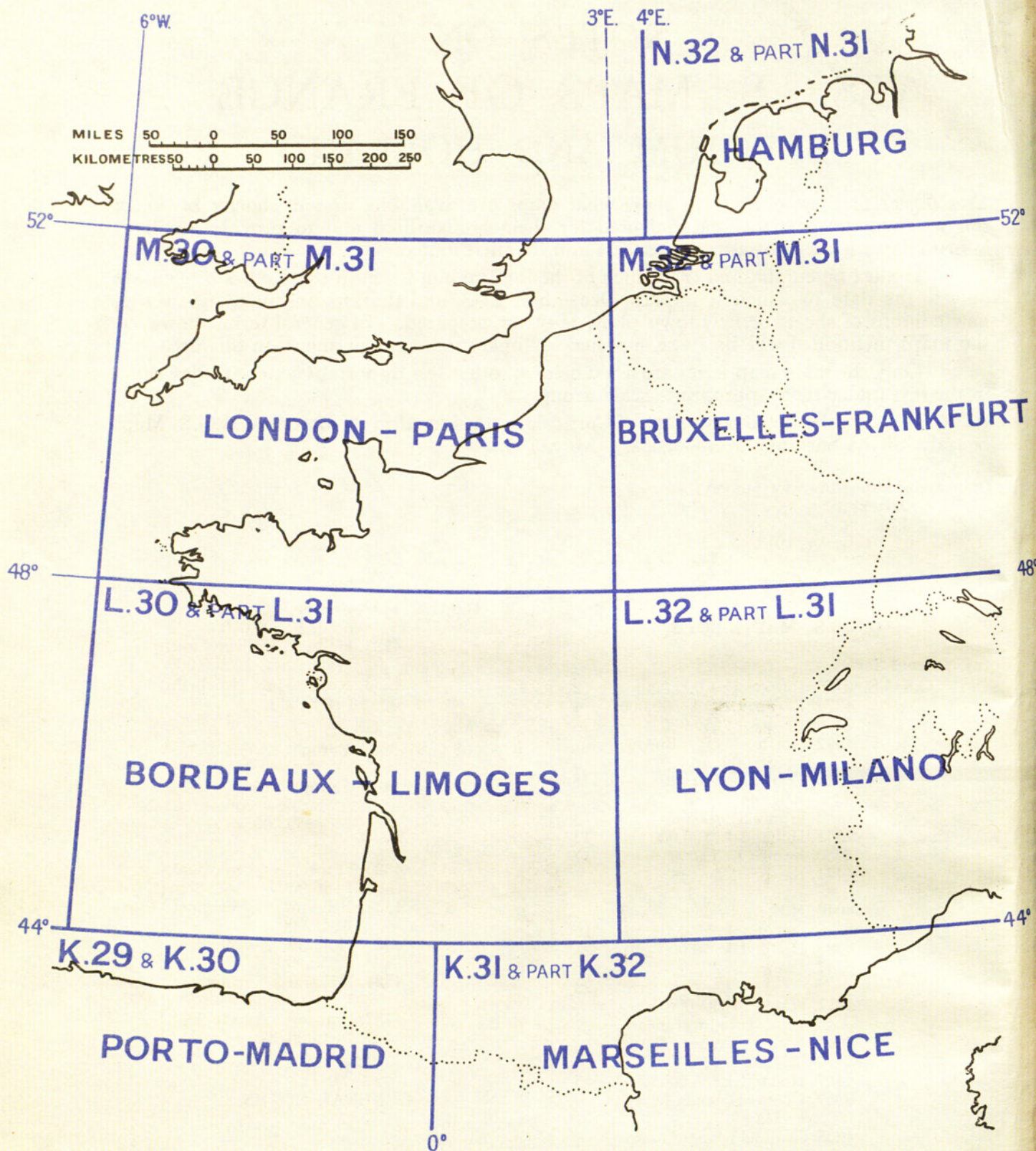
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(The cover is an extract from G.S.G.S. 2957, Europe and Asia 1:4,000,000, Sheet 19,—'Central Europe'.)

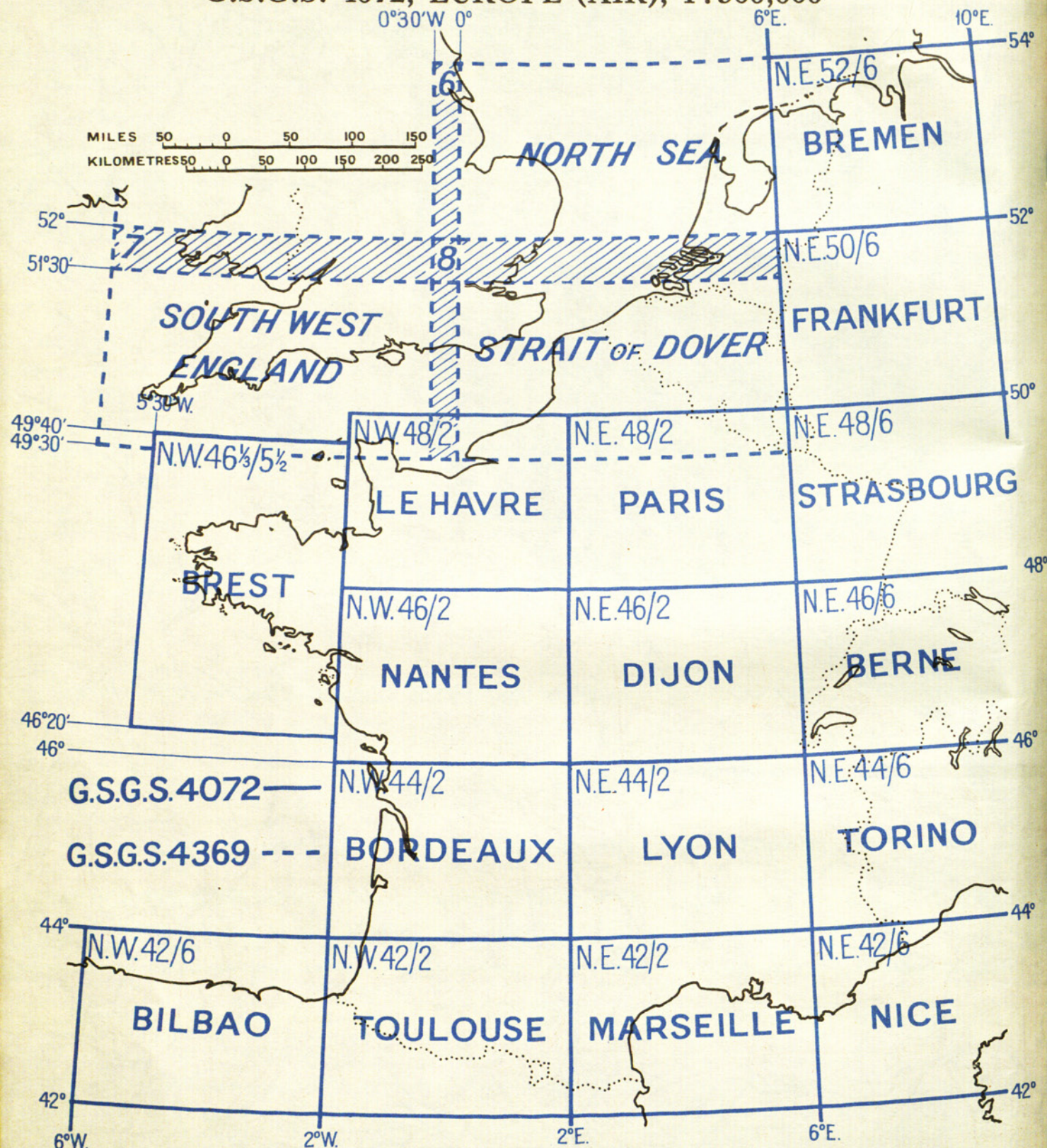


The primary use of this series is for topographical form-at-a-glance: it is also of value as an air map, a fact that explains the purple layer tints in which it is printed (as opposed to the green and brown tints of previous editions). On some sheets smaller names and detail are 'thick' and difficult to read.

Sheets of this series are in process of being 'combed over' to ensure up-to-date information on main roads and railways, consistent name spelling throughout and correspondence of detail along common sheet edges.



G.S.G.S. 4072, EUROPE (AIR), 1:500,000



As its title indicates, this series is principally a flying-map. It has in fact been designed solely to meet R.A.F. (in particular, Bomber) requirements, and the emphasis on certain features, the generalization of all outline and the elimination of detail not essential to the airman, is shown by the sample. Woods stand out conspicuously; in fact their very prominence is a danger, since obviously they are not often so well defined on the ground.

The generalized style of the series limits its value for military use, nor is it infallible for communications. The series has, however, been compiled from sound local maps of equivalent scale and, apart from this generalization, should be accurate.

It should be noted that the military grid is shown by ticks and crosses (in red on the sample).

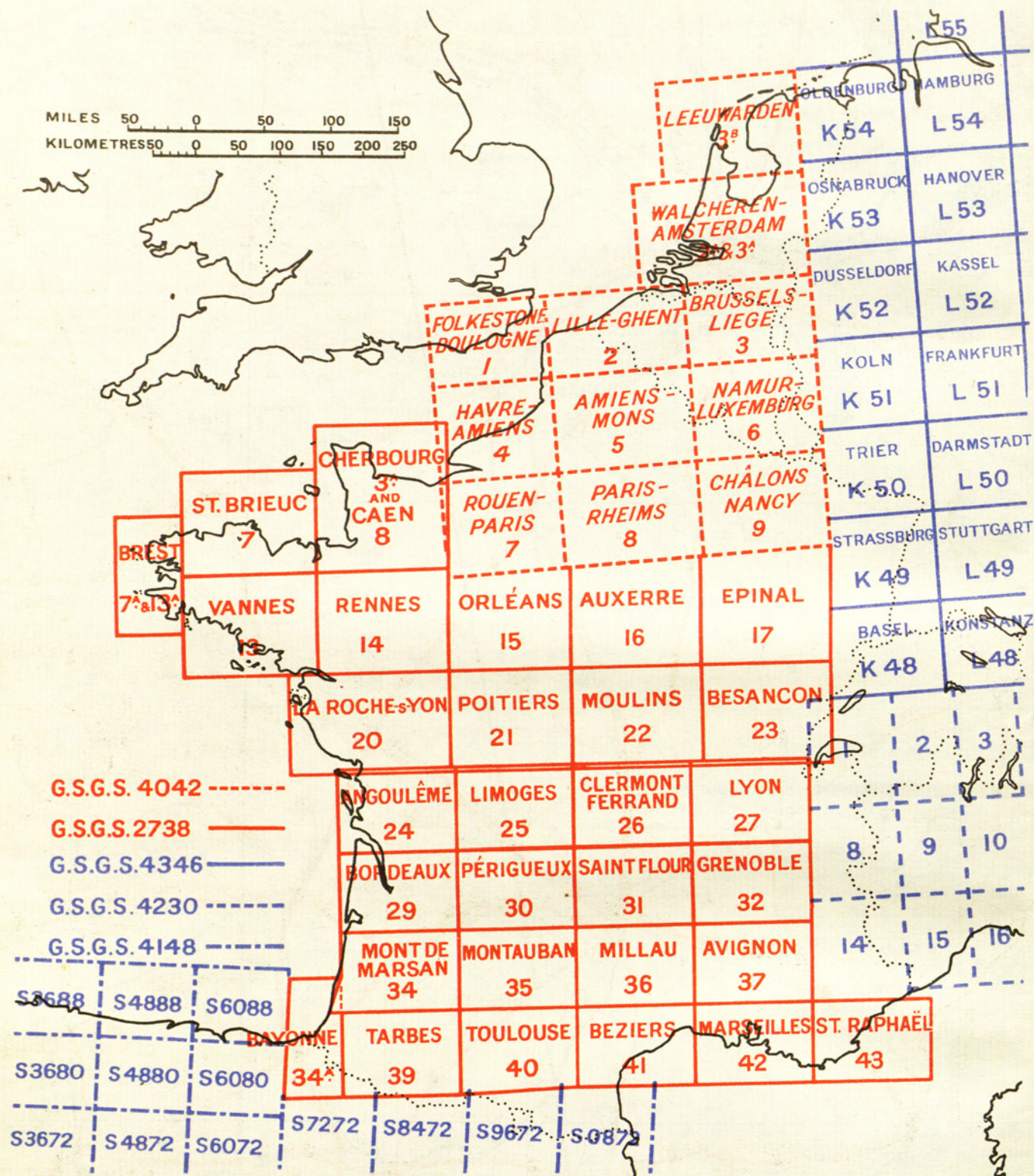
Each sheet overlaps by 20 minutes (about 2 inches) those to north, south, east and west. Except in the case of G.S.G.S. 4369, these overlaps have not been shown on the index.

G.S.G.S. 4369, which joins up with G.S.G.S. 4072, is a similar and equivalent air series covering Great Britain.

Other "Air" maps are described on page 38.



1 : 250,000 SERIES

**General**

The 1 : 250,000 series covering the area and shown above are roughly equivalent in value and similar in detail shown, to normal quarter inch to the mile maps of Great Britain, and are principally M.T. maps. All series (see samples) have been, or are being, produced in "Army/Air" style, a style that attempts to show the maximum military information possible for the scale with a clearness and with a distinction of colour that make the map legible under flying conditions. While the general style of all these 1 : 250,000 series is conditioned by Army/Air requirements, local variations do arise between series, resulting from the different methods of their preparation.

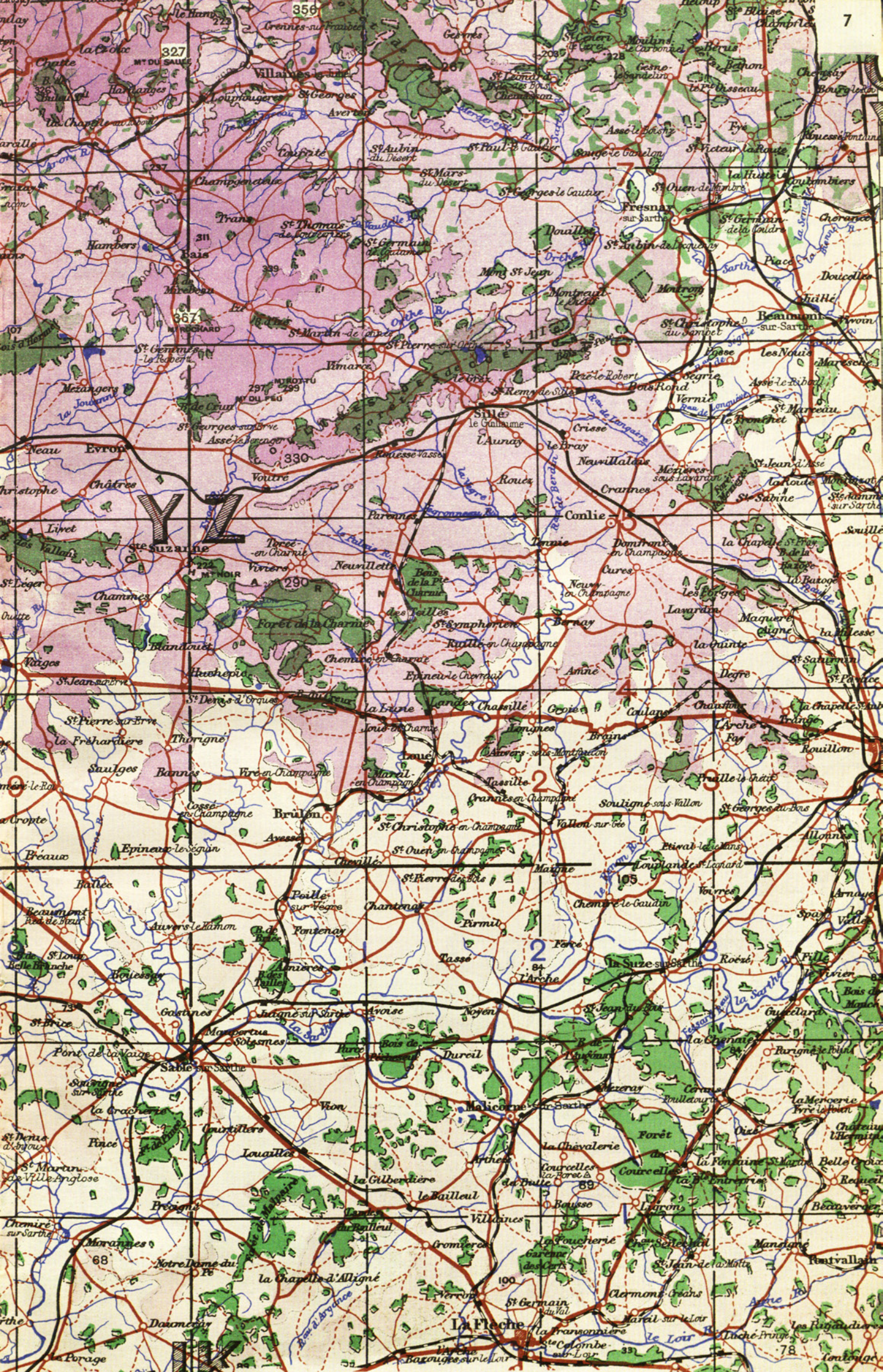
With the principal exception of G.S.G.S. 4042, sheets 1 to 9, overlaps both between sheets of series and between series themselves have been eliminated. Thus, for instance, sheet 3B of G.S.G.S. 4042 fits precisely on to sheet K54 of G.S.G.S. 4346 to the east.

Thus, as regards both style and sheet lines the area is entirely covered by generally homogeneous maps of 1 : 250,000 scale.

It should be noted that the gazetteers to France, to Belgium and to Holland, given at the end of this book refer to these 1 : 250,000 series.

G.S.G.S. 2738, FRANCE, 1 : 250,000 (See sample on page 7)

This series is based on sheets of the French 1 : 200,000 series and, in areas of north-west France, air photo. revision to larger scale series has been stepped down and incorporated.





Railways have been revised from the official French railway map of 1940 and roads revised and classified on a general width basis from the Michelin 1 : 200,000 road maps, mostly dated 1938 or 1939.

In compiling the gazetteer of France, various mis-spellings of village names have been noticed on sheets of this series : in cases of conflict in this respect between this map and larger scale maps, the latter should, as a general rule, be accepted. (G.S.G.S. 4238, being a direct photo-reproduction of the French Michelin 1 : 200,000 series, is of value as a final arbiter in cases of discrepancy.)

Shapes and precise areas of woods are liable to be inaccurate except in areas where the results of air photo. revision have been incorporated : these inaccuracies are liable to be particularly marked in Mediterranean France where woods are, anyhow, difficult to define.

All sheets of this series are now available in full Army/Air style.

G.S.G.S. 4042, NORTH-WEST EUROPE, 1 : 250,000 (See sample on page 8)

This series is similar to G.S.G.S. 2738, and is also an Army/Air version of a last war map. Sheet 2A & 3A and sheet 3B are recent extensions to the old series and are slightly different in style.

The results of air photo. revision to larger scale maps have been incorporated into various areas of all sheets except 2A & 3A and 3B ; in other areas the basic work of the old map has been little altered. This basic work was taken from the best French, Belgian and Dutch maps.

Communications throughout the whole area of the series have been brought into line with information available up to 1942 : railways in France being revised principally from the 1940 French railway map, and those in Belgium and Holland from railway maps collated by War Office Transportation and Intelligence Sections. French roads have been treated as in G.S.G.S. 2738, and roads in Belgium and in Holland are also classified into width categories, from intelligence reports and from modern road maps (principally the Michelin 1 : 200,000 series). Use has been made of canal maps and of collated intelligence for bringing the waterway system up to date. In spite, however, of this fairly thorough revision to communications, the series cannot be accepted as absolutely sound in this respect and, for instance, the precise width into which any road has been classified should not be accepted for detailed planning without further investigation.

It should be noted that in Belgium the French version of place names has generally been accepted, with the Flemish version given in parenthesis only for the more important towns. The map, which is for the most part very clear and legible, is believed to be sound in respect of spellings in all three countries involved.

Except in areas shown as corrected by reference to air photographs, woods shapes on sheets should not be accepted as absolutely trustworthy. This series is likely to be more trustworthy in this respect than G.S.G.S. 2738 since it covers an area where woods tend to be better defined.

Sheets in the north of this series show special layers for areas below sea level ; such areas are emphasized by a conspicuous green-brown tint.

Each sheet of this series, except for sheets 2A & 3A and 3B, carries an overlap of about 15 miles with those to each side.

All sheets of this series are now available in full Army/Air style.

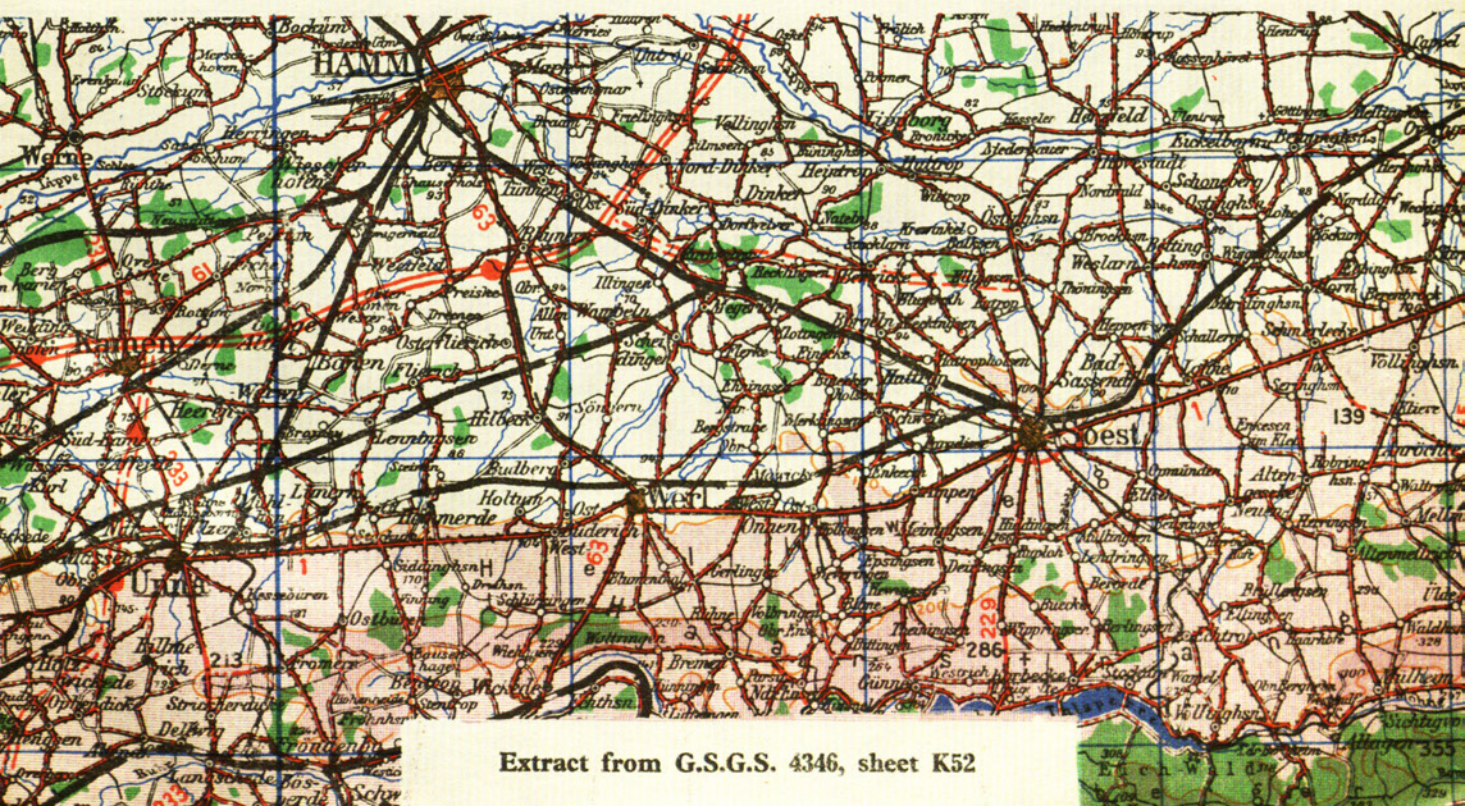
G.S.G.S. 4346, GERMANY, 1 : 250,000 (See sample below)

This series justifies its appearance in these notes since its western row of sheets covers areas of Holland and France, and also, as it forms the natural eastern sequence to G.S.G.S. 4042 and 2738.

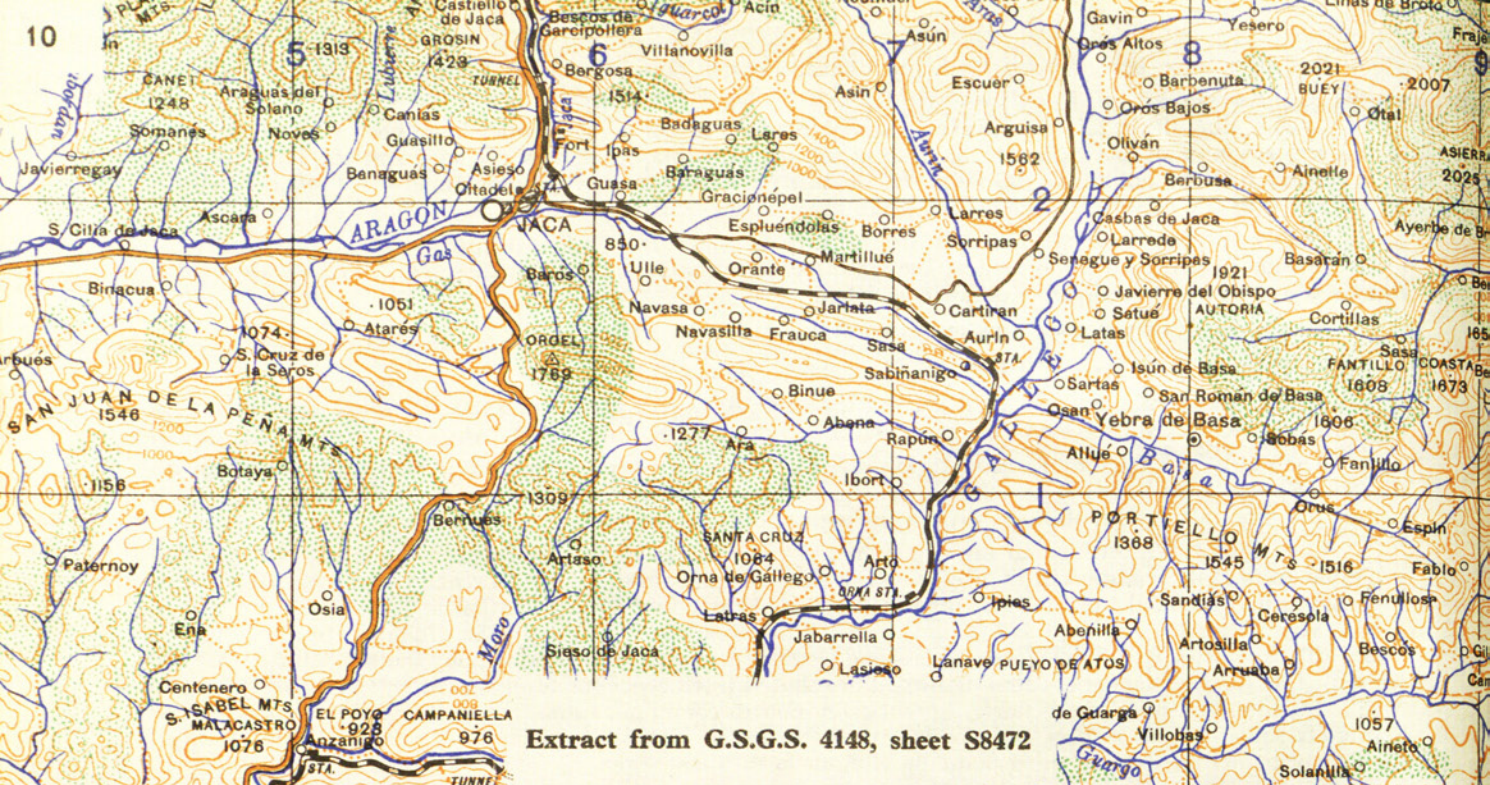
Sheets are based on black editions of the German 1 : 300,000 series which were obtained before the war and most of which are dated post 1930. These have been enlarged to 1:250,000 and 'cleaned up.' Woods have been checked against sheets of G.S.G.S. 3982 (Air, 1:250,000 series) to which some air photo. revision has been made. Contours (and hence layers) have also been taken from G.S.G.S. 3982. In France and Holland the German basis was known to have been prepared from local official maps and no revision has been made to it basically.

In France and Holland roads, railways and waterways have been revised as in G.S.G.S. 4042 and 2738. In Germany, official, recent railway maps have brought the railways up to date (though lack of detailed information frequently prevents giving any but a generalized and approximate alignment to new railways—a fact invariably noted alongside such lines). German roads have been classified on a width basis and brought up to date with available information, the principal difficulty being to establish the extent and alignment of the more modern Autobahnen. Variations in widths of roads are shown on this series by different types of red "fillings" to individual roads.

All sheets of this series, appearing on the index on page 6, are now available in full Army/Air style.



Extract from G.S.G.S. 4346, sheet K52



G.S.G.S. 4148, IBERIAN PENINSULA, 1 : 250,000 (See sample above)

Spain being the worst mapped country in Western Europe, it is hardly surprising that the 1 : 250,000 series which covers it is far less reliable than any other 1 : 250,000 series in this area. This lack of reliable Spanish material, especially in the north of the country, affects those areas of G.S.G.S. 2738 which extend into Spain (sheets 34A and 39). On the other hand, those parts of sheets of G.S.G.S. 4148 which extend into France are based on French 1 : 200,000 originals and have a higher value.

G.S.G.S. 4148 is a recent (1941) compilation from isolated patches of (generally old) Spanish 1 : 50,000 sheets, from rather unconvincing Province maps at 1 : 200,000, and from a mixture of small scale material. The series has obvious general value but, of necessity, is inclined to be erratic over such details as precise alignments of roads or outlines of woods. The same lack of information affects communications and in Spain neither road nor rail information or classification can be regarded as nearly as reliable as in France.

From further material that has become available, Army Map Service, Washington, is preparing a new 1 : 250,000 series (to be called G.S.G.S. 4455) on new sheet lines, incorporating a width system of road classification and in full Army/Air style : even so, Spain will remain less well mapped than France.

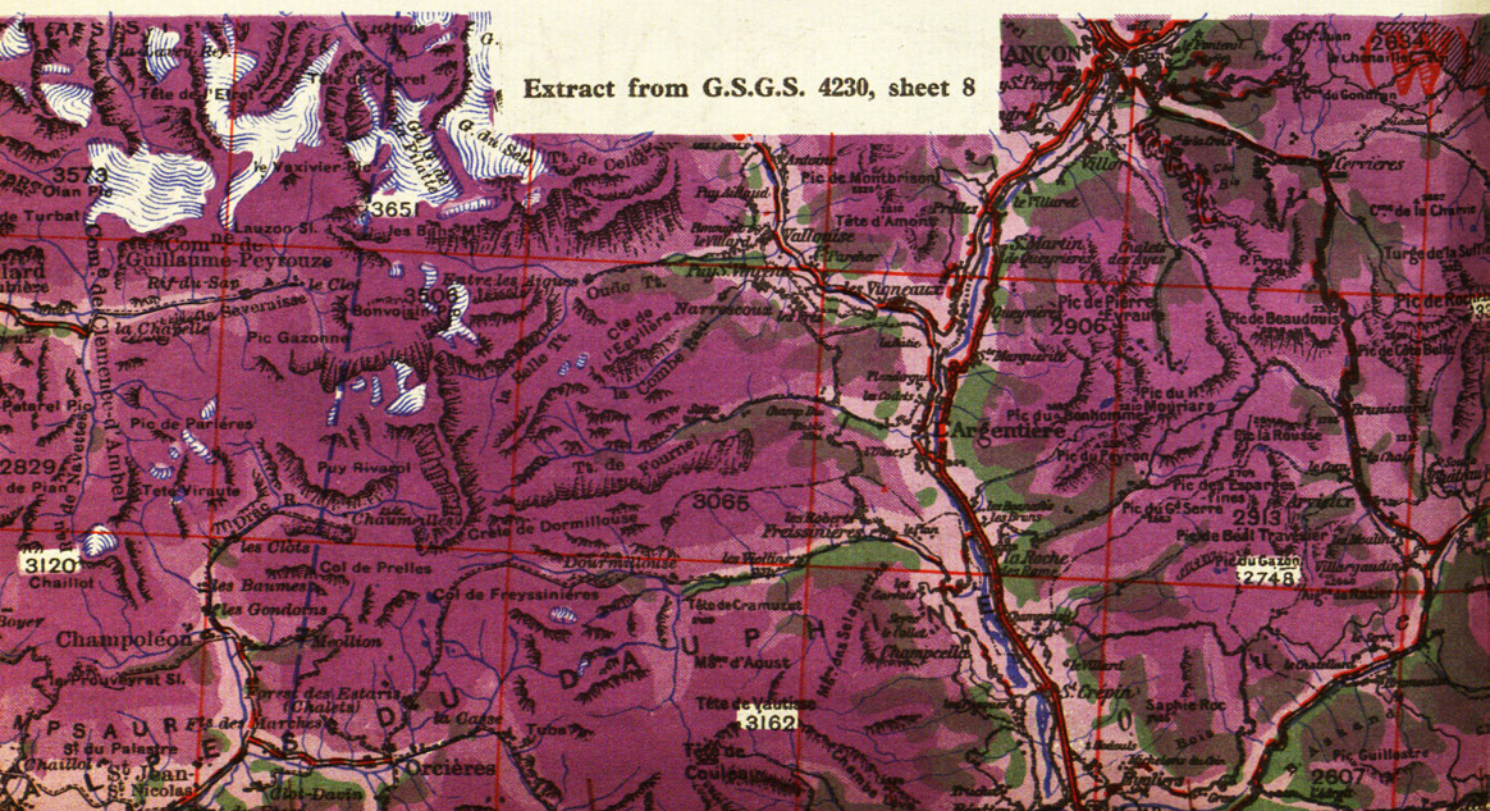
G.S.G.S. 4230, ITALY, 1 : 250,000 (See sample below)

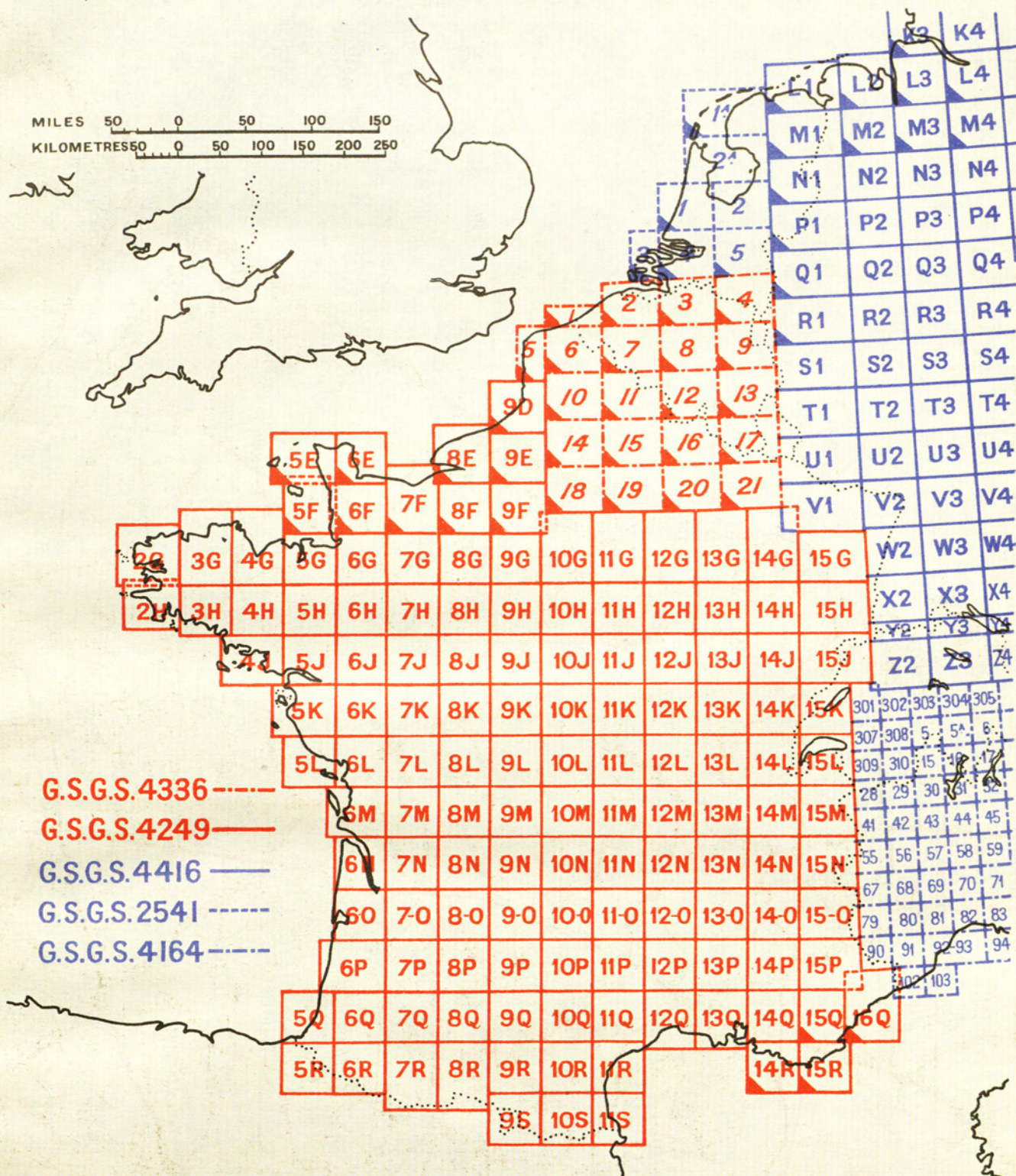
This series has been described in detail in "Notes on G.S.G.S. Maps of Italy, 1 May 1943" (pages 5 and 6) and only general notes on it are given here.

The basis for the series as a whole was the Italian 1 : 250,000 series "Carta d'Italia del Touring Club Italiano" dated 1929-1937. The northern parts of the northern row of sheets (1, 2, 3, etc.) which extend beyond the limits of the Italian basic series have been prepared from modern Swiss maps of equivalent scale, while the western extension of the series into France, to join sheets 1, 8 and 14 up to sheets 27, 32 and 37 of G.S.G.S. 2738, has been based on old editions of G.S.G.S. 2738 and on modern French 1 : 200,000 sheets. It should also be noted that this series joins up precisely with G.S.G.S. 4346—the German 1 : 250,000 series—along the 47°N. parallel.

Communications on the series are generally reliable, roads being classified into width categories.

All sheets of this series are now available in full Army/Air style.





It will be seen from the index that five 1:100,000 series are involved. All, except for the Italian series, G.S.G.S. 4164, have been prepared in a generally uniform Army/Air style, having been re-drawn from existing maps.

With a few minor and unimportant exceptions, all series, as well as all sheets of series, join up exactly with each other without overlaps. Detail along all mutual sheet edges has been checked to ensure uniformity across sheets.

Maps of this scale are primarily required for use by armoured forces but the scale is ideal for many other military needs, each sheet covering a large area and providing, for most types of country, sufficient detail for users to be able to locate themselves fairly precisely. For M.T. the detailed road information given is of value. The fact that the style of the various series is largely homogeneous is again of value.

G.S.G.S. 4249, FRANCE, 1 : 100,000 (See sample on page 12)

The method of preparation of this series varies. In the north and south-east, where good 1:25,000 maps have been prepared with the use of air photographs, this series has been based on boiled-down versions of such 1:25,000's : in areas (mostly in the east of France) where sheets of the good modern French 1:50,000 series exist this 1:100,000 series has been based on it : for all other areas the series has been taken from sheets of the French 1:80,000 series. (Each sheet carries a note describing the material used.) This 1:80,000 series has, in fact, been the basis of the vast majority of sheets of G.S.G.S. 4249, and it is on the 1:80,000 sheet lines that the sheets of this 1:100,000 series are based (six 1:80,000 quarter sheets making up one 1:100,000 sheet).

The French 1:80,000 series was originally prepared during last century and has been revised intermittently since : dates of basic 1:80,000 sheets used vary considerably.

Relief on these French 1:80,000 sheets is shown by black hachuring, supplemented by fairly numerous spot heights (see sample of G.S.G.S. 4040B on page 19) : it is from these hachures that the contours on G.S.G.S. 4249 have, for most areas, been prepared. Hence, while relief on G.S.G.S. 4249 in general is correctly shown, great reliance should not be placed on precise details of contouring where sheets are based only on 1:80,000 material. It should be noted that an unlayered edition of sheets of this series is also being produced.

Except in areas where sheets show that air photo. revision has been incorporated or that modern 1:50,000 sheets have been used, little reliance should be placed on precise shapes of woods.

Roads have all been revised and classified on the same general width basis as for other larger and smaller scale series, the Michelin 1:200,000 series being used as the yard stick. Modern railway information has also been incorporated.

The block of sheets comprised by the vertical rows of sheets 7L-7R, 8K-8R, 9J-9S, 10J-10S, 11J-11S, 12J-12Q, 13J-13Q, 14J-14R (see index on page 11), covering the south and centre of France are being prepared by the Army Map Service, Washington. Such sheets carry the additional identification number AMS M661 : in other respects they are almost exactly similar to sheets prepared in this country.

Sheets available to date are shown on the index on page 11 marked with a solid triangle in the bottom left corner. Work on all remaining sheets is in hand and they should be published shortly.

G.S.G.S. 4336, N.E. FRANCE AND BELGIUM, 1 : 100,000 (See sample on page 14)

Like several other series in this area, this map is derived from a last war series, itself compiled from French 1:80,000 and from Belgian 1:40,000 sheets. In general, the old series has been revised from air photo. revision made to G.S.G.S. 1:25,000 and 1:50,000 series in the same area, and from more modern French and Belgian material incorporated into these same larger scale G.S.G.S. series. In particular, railways and roads have been revised and the latter sorted into the standard French and Belgian width categories.

The series is on the whole clear and legible and should generally be found to be sound and satisfactory, though tending to be rather generalised.

All sheets of the series are available (as shown by the solid triangles on the index) in the full Army/Air style of the sample.

G.S.G.S. 2541, HOLLAND, 1 : 100,000 (See sample at top of page 15)

The present series is a third edition. The series was prepared initially during the last war from Dutch 1:50,000 sheets and only covered the south-west and centre of Holland ; at the beginning of this war it was revised from more modern Dutch 1:50,000 and 1:25,000 material. In its present state the series, with its extension north of two sheets, incorporates revision from air photographs and from all available Dutch material.

Roads and railways have been revised and reclassified, the former into width categories which agree with those used on G.S.G.S. 4042 in this area.

Its vast amount of topographical detail, such as dykes, etc., makes Holland a difficult country to show cartographically, but on the whole, this series appears to have succeeded quite well.

Sheets shown on the index on page 11 with filled-in corners are available at the present : remaining sheets are in hand and will be published within the next month or so.

G.S.G.S. 4416, GERMANY, 1 : 100,000 (See sample at foot of page 15)

This series has been redrawn, principally from the German original 1:100,000 series. These German maps extend just west of the frontier and where they end Dutch 1:50,000, Belgian 1:40,000 and French (modern) 1:50,000 material has been used.

The German original sheets, which are black only, show relief by hachures : contouring on G.S.G.S. 4416 in Germany has, therefore, to be taken from the German 1:25,000 series.

Rather patchy pieces of air cover have been available for various western sheets of the series. Outside areas of air cover the date of the original material used gives the value of the sheet : each sheet carries a diagram showing dates of material and extent of air cover used, if any.

Roads and railways have been revised, and, in the case of roads, classified on the same width basis as G.S.G.S. 4346.

The style of the series corresponds very closely with that of G.S.G.S. 4249 (France 1:100,000) and both series tend to be of similar value and merit.

Few sheets only of this series are now available (these are marked up as for other series on the index on page 11) ; all sheets are in hand and will be published within the next few months.

G.S.G.S. 4164, ITALY, 1 : 100,000

This series has already been fully described in the equivalent volume to this on G.S.G.S. maps of Italy. It is the only series in the area not prepared in Army/Air style but, for all that, is quite a good, clear map.

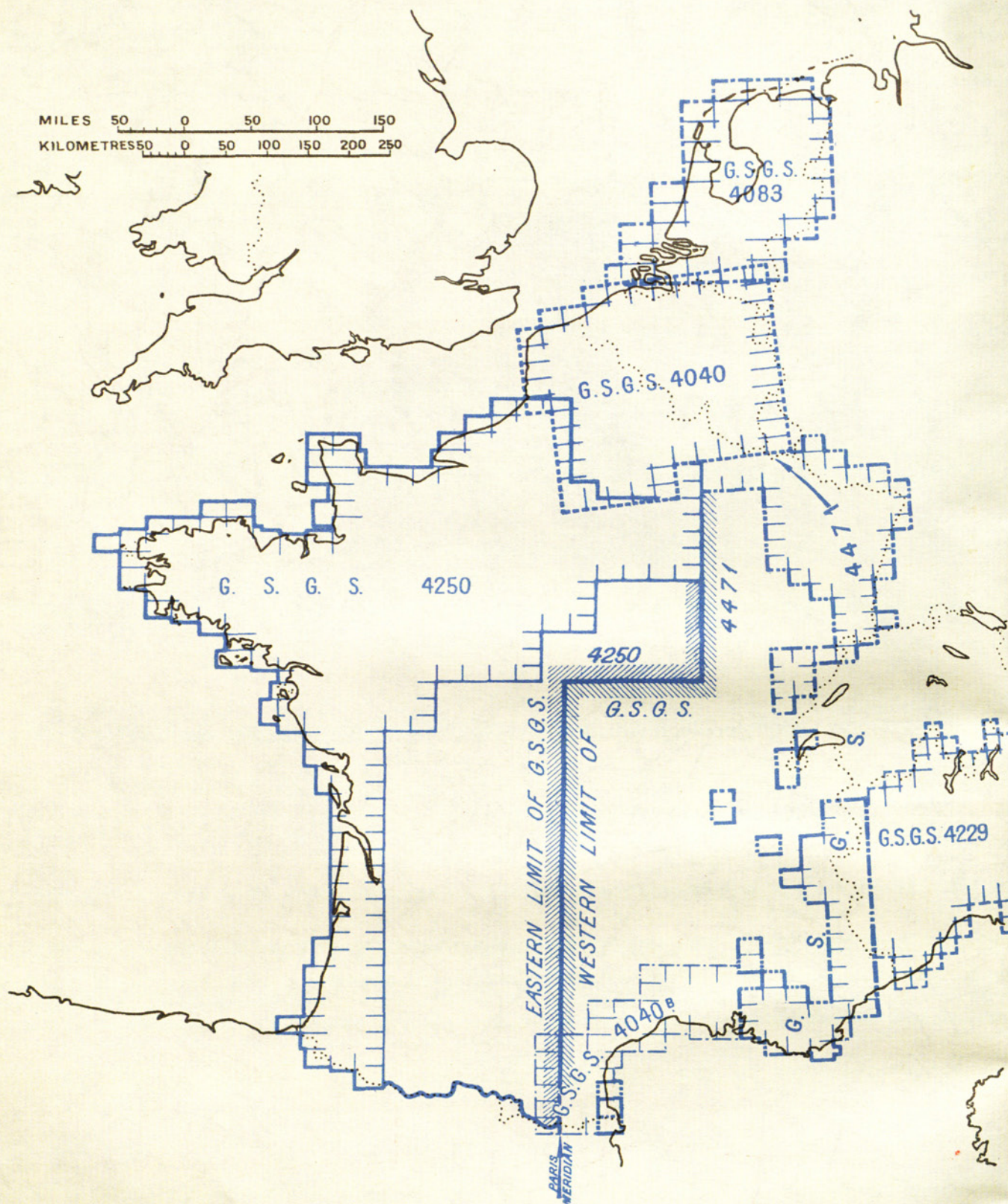
SPAIN

It should be noted that, except in the Gibraltar and Barcelona areas, no G.S.G.S. 1:100,000 series of Spain exists or is in course of preparation.





1:50,000 SERIES

**General**

The index above shows in general terms the areas covered by the G.S.G.S. 1:50,000 series. It will be noted that map coverage at this scale is patchy and that, while Holland, Belgium and northern France are almost completely covered, no 1:50,000 series is available for the centre of France or for Germany. The explanation lies principally in two factors; the first, that the preparation of a map at this scale demands either sound, and preferably modern, existing map coverage of equivalent or larger scale or else fairly complete coverage of air photographs together with map coverage of sufficient detail (say 1:100,000 scale) to tie down the air photographs. The second factor is the time necessary for the preparation of the vast number of map sheets that would be involved to produce complete 1:50,000 cover. The question of the relative value of complete map cover at 1:50,000 scale as opposed to complete cover at 1:100,000 with special areas at 1:25,000 scale is debateable. At all events the facts remain that neither adequate material nor sufficient time have so far been available for the preparation of total cover at this scale.

It will also be seen from the samples of the series illustrated that none of them carry the layer tints used on smaller scale Army/Air style maps. Nor in fact has any attempt been made towards any particular uniformity of style from series to series, each being prepared in the most economical way. The type and amount of information given on the various series is, however, roughly common, all series having been prepared from much the same type of material and each showing the maximum of detail available and practicable to the scale. Most series have been designed so that the printing of sheets in the field by mobile Field Survey Units can be quickly and simply carried out.

Overlaps of sheets within series do not occur. Slight overlaps between some of the series are involved as shown on the index.

G.S.G.S. 4083, the series covering Holland, will not be issued on an operational scale.

This series covers western France ; its sheet lines, which are exactly the same as those of the French 1 : 80,000 series, are shown in greater detail in a large index at the end of this book.

Sheets have been prepared by enlarging the French 1 : 80,000 series, revising it from air photographs where these existed and then redrawing the map entirely. This method of treatment has various possibilities of error : the 1 : 80,000 series is not a very accurate map and its inaccuracies are increased by the enlargement ; the plotting of contours from the hachures on the 1 : 80,000 sheets, a problem even for the 1 : 100,000 series (G.S.G.S. 4249), is inclined to cause bad inaccuracies in parts ; air photographs often leave areas not covered, and the flying of special survey type photographs takes time. The inaccuracies of certain initial sheets of this series were such that new editions of them had to be prepared. For these later editions and for all sheets now in production the best quality survey air photographs are being used wherever available and the actual French trigonometrical values are being made the basic framework of the map. On sheets now in hand an extra symbol has had to be introduced to show woods, obtained straight from the 1 : 80,000 maps, which have not been revised from air photographs. In addition, contours are being checked with sheets of the 1 : 25,000 series where such exist (*vide* G.S.G.S. 4347, page 23). Thus, the basic reliability of sheets is high in areas shown (on marginal diagrams) as being revised from survey air photographs and comparatively low in areas where only the 1 : 80,000 sheet concerned has been available.

Roads and railways have been revised and classified (the former on the standard French width basis) as for other smaller scale series.

The lettering of place names is one of the bad features of the series ; the names of important towns tend to get hidden and the relationship between a village and its name sometimes becomes ambiguous through bad positioning of lettering. This is partly due to an attempt, initially, to make the same drawings serve both for the 1 : 100,000 series, G.S.G.S. 4249, and for this 1 : 50,000 series.

Mistakes in the spelling of place names, principally of small village names, is another bad tendency on sheets.

Most of the sheets in the northern and western coastal areas are now available. In view of the preparation of 1 : 100,000 series over the entire area it has only been essential to produce 1 : 50,000 sheets for specific areas as occasion demands.



Extract from G.S.G.S. 4250, sheet 9E/1

G.S.G.S. 4471, EASTERN FRANCE, 1 : 50,000 (*Sample below*)

This series is primarily based on sheets of the original French 1 : 50,000 map. Most of the sheets are, in fact, direct photo-reproductions from the equivalent French sheets, while the whole of G.S.G.S. 4471 is on the sheet lines of that series (which are, incidentally, different from those of the 1 : 80,000 series). In this area, it has been decided that the best use for the 1 : 80,000 series—the only series giving complete coverage at this order of scale—is its conversion into G.S.G.S. 4249 (1 : 100,000). In areas, however, where the 1 : 80,000 can be supplemented by air cover, additional 1 : 50,000 sheets are being prepared to extend the coverage provided by the direct reproductions of the French 1 : 50,000 originals. Revision to the photo-reproduced sheets is being carried out in A.F.H.Q. from available air cover. In a few areas French original 1 : 20,000 sheets are available where 1 : 50,000 sheets do not exist : these 1 : 20,000s are also being used as the basis for further sheets of G.S.G.S. 4471, as occasion demands.

It is of interest to note that separate sheets of this series are being prepared at the same time in London, Washington and Algiers : on completion of initial preparation of a sheet reproduction material is circulated by air and the sheet can be printed simultaneously in as many places as is required.

The area covered by this series is shown generally on the index on page 16 : a more detailed index is given at the end of this book. It should be emphasized that not all sheets shown on this detailed index will be produced. Sheets being copied direct from French equivalent originals will be the first to become available. The index on page 16 treats these sheets as separate from the main general area of the series, showing them by a dash and dot line.

All marginal information and notes on this series have been prepared in bilingual (French/English) form.



G.S.G.S. 4040B, FRANCE, 1 : 50,000 (enlarged 1 : 80,000) (Sample below)

This series is a direct reproduction of the French 1 : 80,000 map, enlarged to 1 : 50,000 and gridded. It was originally produced largely as a stage in the production of G.S.G.S. 4250 in order to provide map users with some sort of provisional map coverage of areas pending the production of a redrawn series.

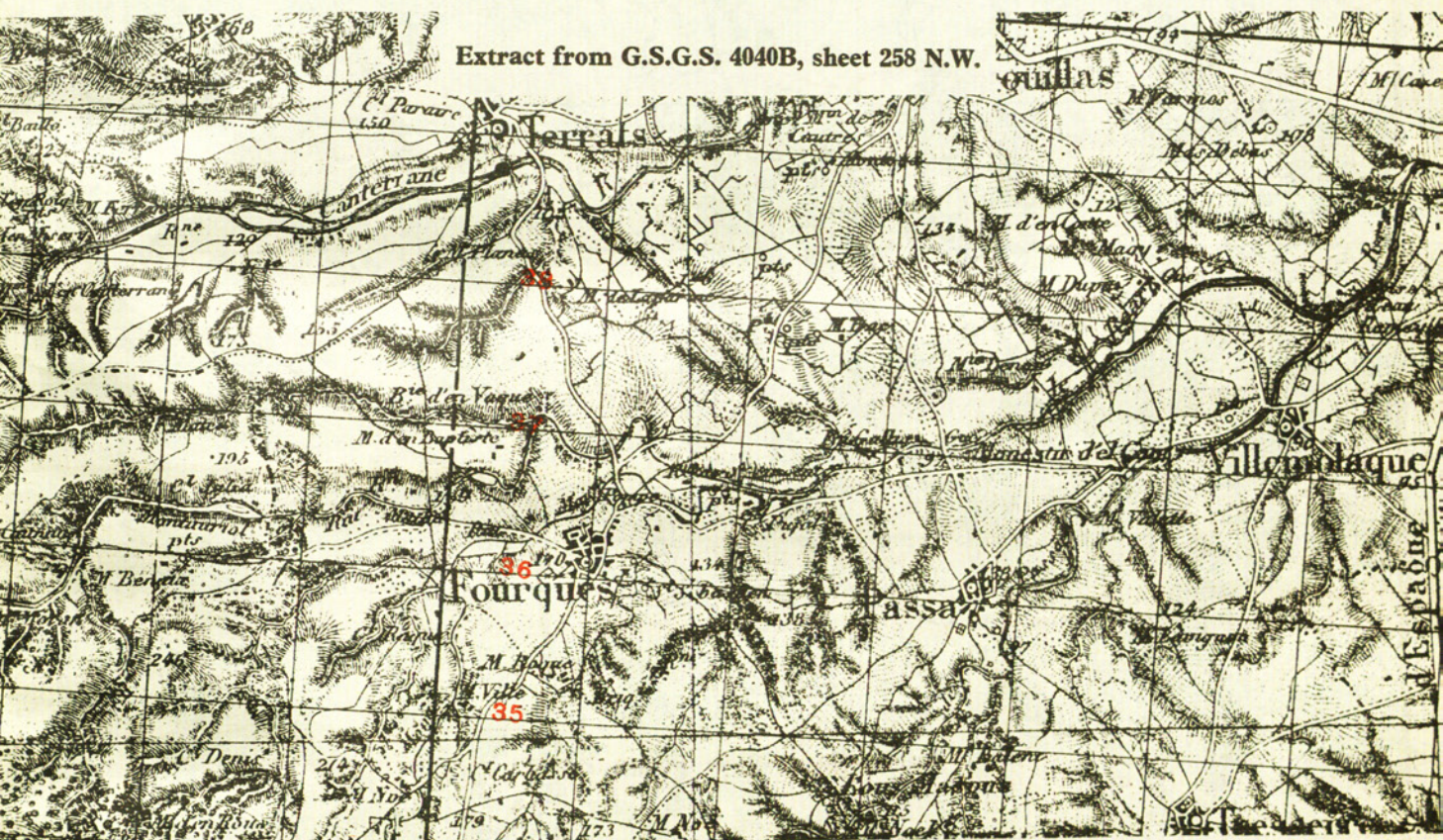
It still continues to serve as a 'stop gap' in coastal areas of south-west and Mediterranean France but for operational requirements it will eventually be superseded by G.S.G.S. 4249 (1 : 100,000) and G.S.G.S. 4250 or 4471 (1 : 50,000). It is because it is the only fairly large scale map available at the moment for large areas of France that it is mentioned here.

The map is difficult to read, as the sample illustrates. The hachures showing relief have, in fact, been based on ground survey and give an accurate picture of the terrain if carefully interpreted. No attempt to revise sheets has been made and the dates of the French originals copied are the only guides to the relative merits of sheets.

The 1 : 80,000 French originals are the only large scale series prepared by the French which give complete cover over the whole country and the sheet line system of this series is the basis of the sheet lines of the G.S.G.S. 1 : 100,000 series (G.S.G.S. 4249), and of one of the 1 : 50,000 series (G.S.G.S. 4250, but not of G.S.G.S. 4471).

The index on page 16 shows an area in Mediterranean France, within the general area to be covered by G.S.G.S. 4471, in which sheets of this series are available. Sheets of G.S.G.S. 4040B are also current for the strip of sheets of G.S.G.S. 4250 down the south-west coast to the Spanish frontier (see index), but here, as elsewhere, they will eventually be superseded. Included with the general notes on French maps is an index to the complete 1 : 80,000 series : this shows sheet lines and numbers of G.S.G.S. 4040B. (It should be noted that each sheet is produced as a quarter of one main sheet and has the main sheet number followed by N.W., N.E., S.W. or S.E., as the case may be.)

In passing, it is worth mentioning that an identically similar series, G.S.G.S. 4040A, was prepared as a western extension to G.S.G.S. 4040 but has now been superseded by G.S.G.S. 4250.

**G.S.G.S. 4040, N.E. FRANCE AND BELGIUM, 1 : 50,000 (See sample on page 20)**

The general position of this series is shown on the index on page 16 : a more detailed index is given at the end of this book.

Initially prepared in 1938-9 for the B.E.F., this series has since been extensively revised : the general style and appearance of the map, however, remains unaltered.

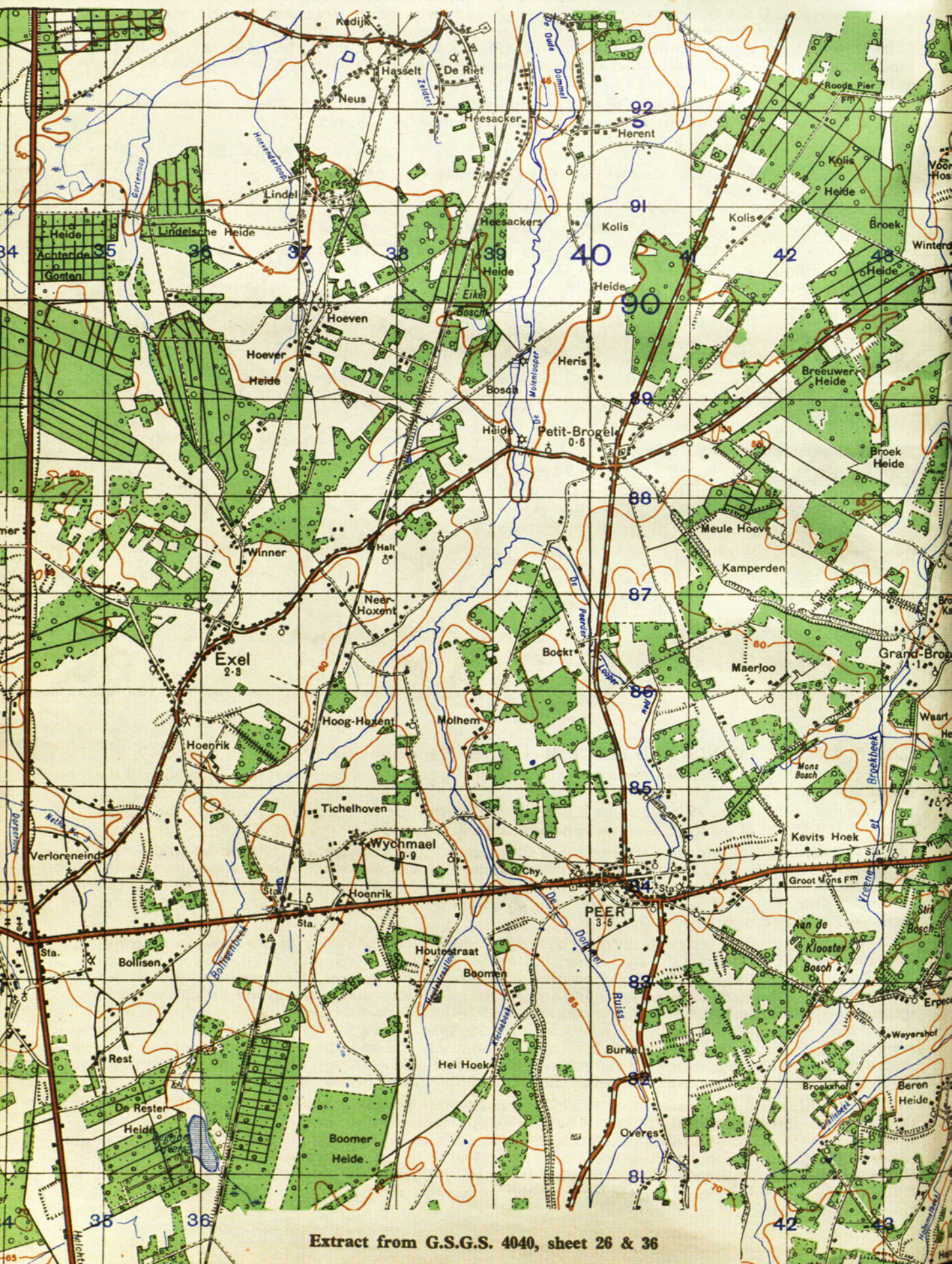
The sheet lines of this series, unlike those of all other 1 : 50,000 series, have no relationship to the sheet lines of any local series, either French or Belgian. This means, for instance, that any one new (possibly captured) French 1 : 50,000 sheet or Belgian 1 : 40,000 sheet is liable to affect up to four sheets of G.S.G.S. 4040 : this fact also explains the extreme amount of detail appearing on certain parts of several sheets in France while the rest of such sheets remains comparatively open.

For France the series was originally based on French 1 : 50,000 and 1 : 20,000 original maps where these were available : beyond the limits of this good material sheets had to be based purely on the French 1 : 80,000 series. For Belgium the map was compiled from the local 1 : 40,000 and 1 : 20,000 series. Unfortunately it was decided during initial (1938-9) compilation to simplify and generalize the map and a considerable amount of detail, such as tracks, minor names, ditches, etc., was omitted. During the revision of the series (1941-3) much of the extra detail shown on the original material was added. Air photographs covering a large amount of the area became available during revision and were used to bring the map up to date. The extent of air photo. revision on each sheet is shown by a diagram in the sheet margin in the normal way. Sheets 33, 34, 35, 46, 47, 52, 53, 57, 58, 62, 63, 65 and 74, in the Lille area, were revised by the B.E.F. during the winter of 1939-40.

Recently certain additional French 1 : 50,000 originals have become available in areas where previously the only basic map material had been the French 1 : 80,000. Comparison, however, shows that the revision which has been made to such sheets of G.S.G.S. 4040 (from air photographs, etc.) brings them into line with nearly all the additional detail on these newly acquired 1 : 50,000s as well, of course, as adding the most recent information which was precluded by the dates of the 1 : 50,000 sheets : the only important point was slight differences of contouring (which was to be expected, seeing that the 1 : 80,000 had been the basis of the G.S.G.S. sheets concerned).

The modern edition of this series differs from its predecessor in two further respects. Previously, overlaps existed between all sheets : though helpful from some points of view these have now been eliminated, principally in order to bring sheets down to a size that can be printed in the field by Survey units and also because of the work involved in trying to keep overlaps up to date (revision to one sheet immediately affecting the eight adjoining sheets). The other point of difference is that on the new edition roads have been revised and reclassified on the general width basis from the Michelin 1 : 200,000 series and from intelligence reports.

All sheets of the series are available in their revised form.



G.S.G.S. 4083, HOLLAND, 1 : 50,000 (*Sample below*)

This series will not be issued for operational requirements: it is only mentioned here because limited stocks of sheets are at present available for Intelligence and Planning purposes. The area covered by the series is shown on the index on page 16. Sheet lines of the series correspond precisely with those of the (old) Dutch 1 : 50,000 series from which G.S.G.S. 4083 was copied. Along the southern edge of the series there is a small overlap with G.S.G.S. 4040.

The Dutch sheets copied vary in date from 1911-1939. The value of each sheet is intimately linked with the date of the original copy and this information is quoted in sheet margins. The dates of the original Dutch sheets are of especial significance since no revision has been incorporated into this series, e.g. from air photographs or road maps, as in the case of other 1 : 50,000 G.S.G.S. series. In Holland the G.S.G.S. 1 : 100,000 (G.S.G.S. 2541) and 1 : 25,000 (G.S.G.S. 4427) series have been fully revised and time and resources have not so far been available for revising this series too: in fact, however, the larger and the smaller scale maps together meet most demands.

The Dutch 1 : 50,000 originals are very highly coloured and detailed maps: in the reproduction a good deal of the detail has become obscured and in many places considerable confusion exists between ditches, roads, tracks, walls, etc.



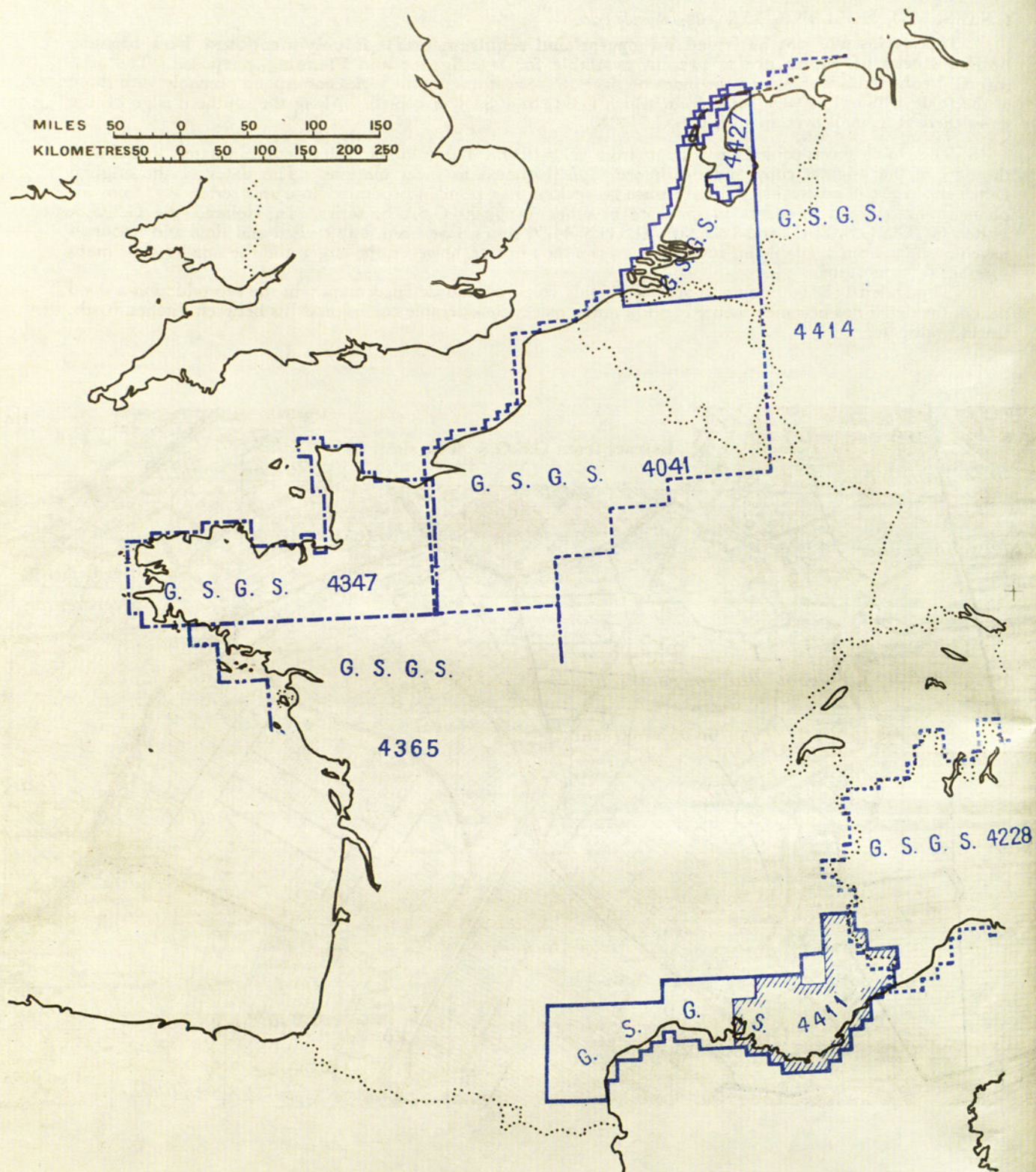
G.S.G.S. 4156, THE RUHR, 1 : 50,000. This is the only G.S.G.S. 1 : 50,000 series so far produced for Germany; nor in fact have the Germans themselves produced more than a few scattered sheets at this scale in Germany. G.S.G.S. 4156 has been photo-reproduced in colour from French sheets, mostly dated 1940, themselves prepared from the German 1 : 25,000 sheets. The series consists of a square block of nine sheets covering the area, all of which are available. No revision has been carried out to sheets though the area is one in which developments, not excluding bomb damage, do call for revision.

G.S.G.S. 4229, ITALY, 1 : 50,000. This series has been described in detail in "Notes on G.S.G.S. Maps of Italy" and for this reason and also because the series barely extends outside the Italian frontier, only the briefest notes on it are given.

The Italian original 1 : 50,000 sheets are prepared in black only: they have been reproduced direct with grids added. Gaps in the series have been filled by the preparation of redrawn sheets based on the corresponding 1 : 25,000 Italian series which show roads in red, contours in brown, woods in green, water in blue and names and all other detail in black. All sheets are available.

G.S.G.S. 4144, SPAIN, 1 : 50,000. This series is a direct reproduction in colour of the local 1 : 50,000 series which covers parts of Spain. The production of this series has been taken over by the Army Map Service, Washington, and given the additional identification number AMS. M. 781 to M. 787. Comparatively few sheets exist in the north of Spain and none are as yet available.

1:25,000 SERIES

**General**

The main areas of France, Belgium and Holland covered by G.S.G.S. 1:25,000 series are shown on the index above, along with an indication of such adjoining 1:25,000 series as have been produced or as are in preparation. A large index at the back of this book shows the sheet lines of the series involved, against a background of detail from which the relative positions of individual sheets can be located.

As in the case of production of 1:50,000 series, the preparation of a 1:25,000 series requires adequate material, resources and time. Maps of this large scale are only essential, from the military point of view, for areas where a force is likely to require highly detailed information about terrain, for instance to assist artillery predicted shoots or for the planning and execution of an assault operation. The preparation of 1:25,000 maps in areas unlikely to be scenes of intensive military operations is obviously extravagant and unnecessary, since a map of this scale is, for instance, quite impracticable for M.T. purposes. These, therefore, are the reasons why only comparatively small areas of country have essentially to be covered by 1:25,000 series. Where local series of similar scale exist the problem of providing 1:25,000 series is, initially, that of photo-reproducing an existing series. Where no equivalent series exists the new map has to be produced by air survey methods which involve plotting all features in great detail and, hence, large resources of skilled draughtsmen. These factors explain the rather patchy appearance of any index showing 1:25,000 cover in this area.

All the G.S.G.S. 1:25,000 series have been designed in simple styles, partly to speed up initial production and partly so that sheets can be produced under field conditions by Field Survey units. The simplified style of sheets, however, carries no implication of generalization of detail.

G.S.G.S. 4347, FRANCE, 1 : 25,000 (Western) (*Sample below*)

Details of the precise positions of sheets of this series are given on the large index at the back of this book. All sheets are based on the local Lambert Zone I grid lines, each sheet covering an area of 10 kms. by 15 kms. This Lambert Zone I grid in fact covers precisely the area of the series and the name is frequently used as part of the title of the series, so as to distinguish it from other G.S.G.S. series of other parts of France at this scale.

The series has been prepared by first plotting the basic French trigonometrical points, then by identifying them on specially flown 'survey type' air photographs, rectified to eliminate any distortion due to tilt of aircraft. Detail is then plotted from the air photographs. Local maps and ground information are used to assist in interpretation and to provide place names, identifications of importance, classification of roads and railways, etc. The maps are contoured by locating as complete a network of spot heights as possible from existing map sheets and then by interpolating contours stereoscopically from the air photographs.

Results obtained are believed to be sufficiently accurate, in proportion to the scale of the map, for most practical purposes (e.g. for artillery requirements).

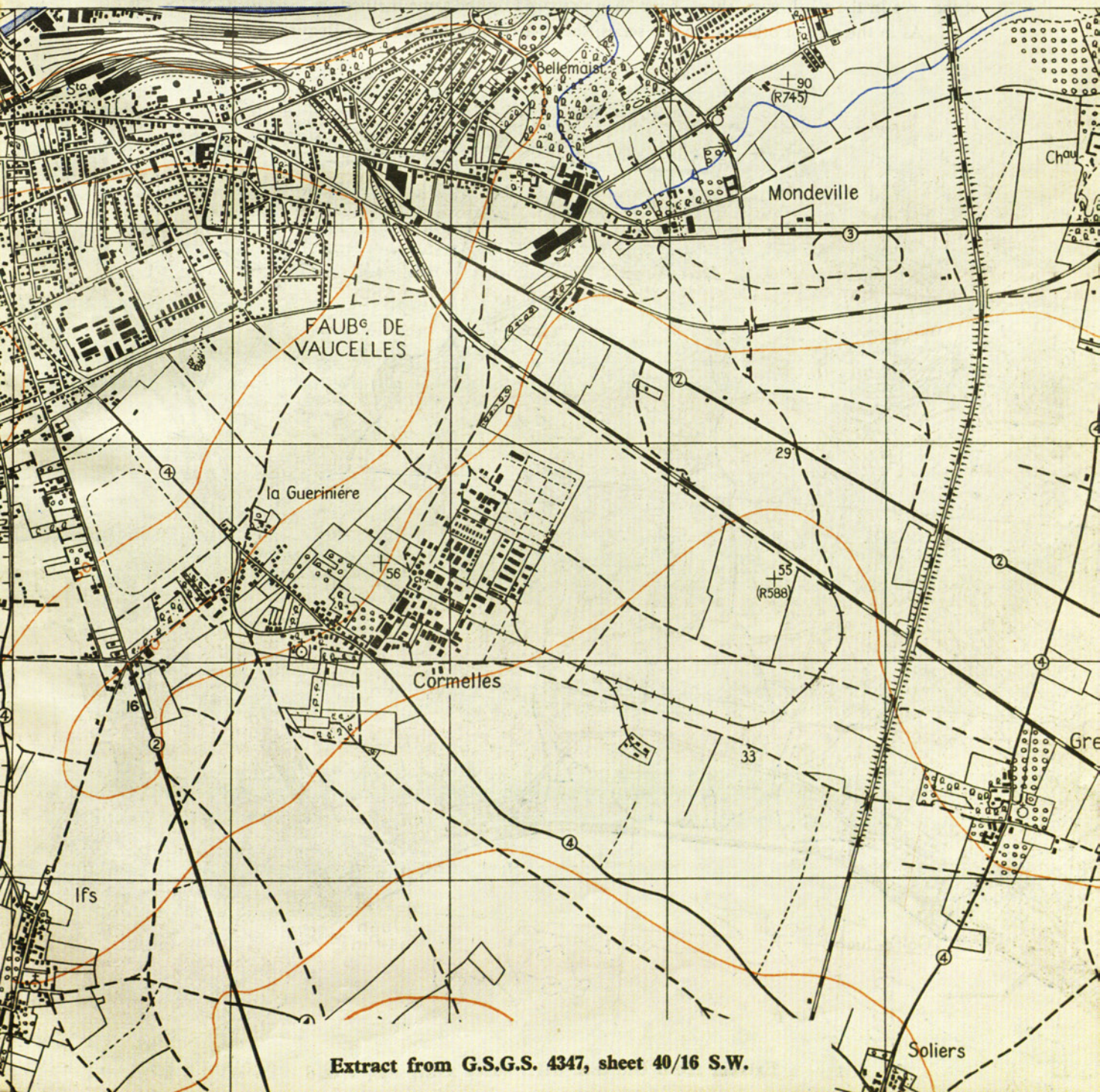
The series is prepared in a simplified style, as the sample below shows but caters for all normal topographical features of military interest, giving detailed coastal information and showing as far as practicable all walls, hedges, ditches, hollows, etc., that may be of importance to fighting troops. (It should, however, be emphasized that, accurate as the map is believed to be, additional information can and should always be added to it by local reconnaissance wherever possible.)

It has already been mentioned that the 1 : 50,000 series (G.S.G.S. 4250) has been corrected to agree with this series where it exists.

Sheet numbers, like the sheet lines, are related to the grid. Sheet numbers are allotted to blocks of four sheets and individual sheets are given this main number followed by N.W., N.E., S.W. or S.E., as the case may be.

The priority for production of sheets is from the coast inland : several sheets are already available and further sheets are reaching publication stage, week by week, at the moment.

G.S.G.S. 4365, FRANCE, 1 : 25,000 (Central). This series is designed to cover the area south of G.S.G.S. 4347 and G.S.G.S. 4041. No sheets of it have so far been published but it will be identical in style with G.S.G.S. 4347.



Extract from G.S.G.S. 4347, sheet 40/16 S.W.

G.S.G.S. 4411, FRANCE, 1 : 25,000 (Mediterranean) (Sample below)

This series is on the basis of the French 1 : 20,000 series, in so far as available originals have been photo-reproduced in colour. New sheets being prepared are on the theoretical sheet lines of this 1 : 20,000 series. Sheets of this French 1 : 20,000 series are quarters (or sometimes eighths) of sheets of the French 1 : 50,000 series and, thus, this series is related to G.S.G.S. 4471 (see page 18).

The general area to be covered by this series is shown on the index on page 22 : the shaded area on this index shows the block of sheets for which French 1 : 20,000 material is available, and which is being reproduced direct. The index at the back of this book should be consulted for further details of positions of particular sheets and for sheet numbers.

The accuracy of those sheets which are copied direct from the French originals varies with the dates of the originals (dates being given at the bottom right-hand corner of sheets). The original French map, apart from slight out-of-dateness, is extremely accurate and detailed. Sheets produced from the 1 : 20,000 originals are now being revised from such air cover as is available : (the revision being principally carried out by A.F.H.Q.). The reduction of scale that has been involved in producing these sheets direct from the 1 : 20,000 originals has been unfortunate, in that some of the extremely fine work on the French maps has become congested and complicated to read.

The western part of the series lies outside the area covered by the French 1 : 20,000 series (outside the shading on the index on page 22) and has, therefore, to be prepared by the same type of air survey methods as G.S.G.S. 4347, making maximum use of ground information. The preparation of these sheets is being undertaken by Army Map Service, Washington. The number of such sheets prepared depends on the extent of air photographic cover and the area shown on the index is an approximate indication of the outside limits of the series.

G.S.G.S. 4041, N.E. FRANCE and BELGIUM, 1 : 25,000

The methods of preparation of this series are identical with those of G.S.G.S. 4347 and 4411 and no detailed description is therefore necessary. The area of the series is shown on the index on page 22 and further details are given by the large index at the end of the book.

The series is on the same sheet lines as G.S.G.S. 4040 (the 1 : 50,000 series of this area) and sheets which are quarters sub-divisions take the 1 : 50,000 number and add N.W., S.E., etc., to them.

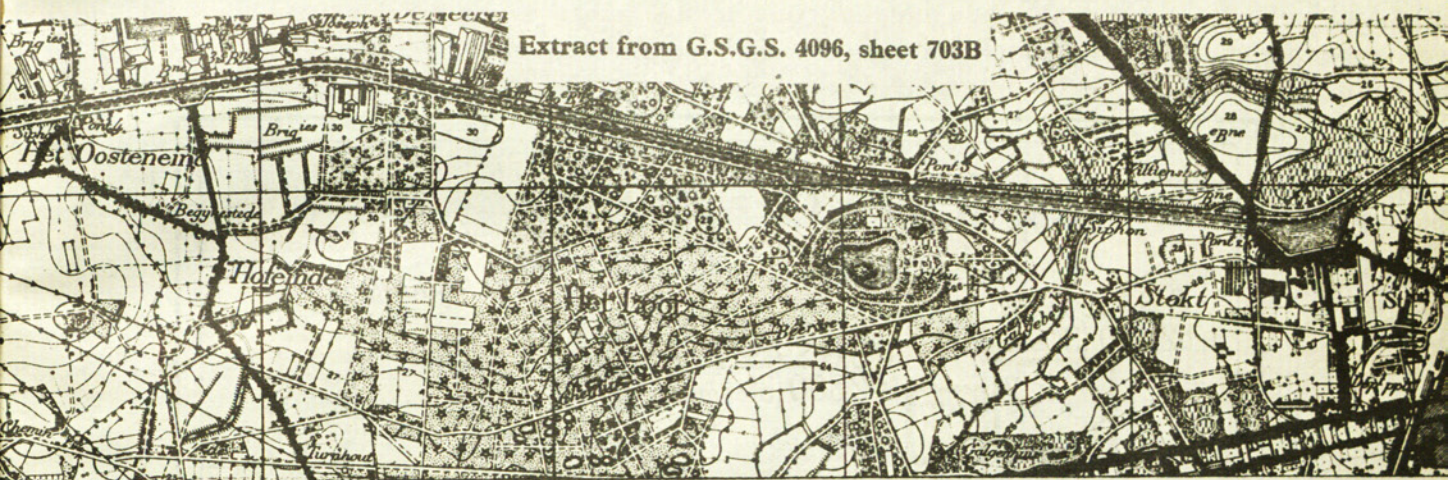
The area north and east of Paris is based on French and on Belgian 1 : 20,000 sheets which were copied direct. Such sheets have recently been brought up to date from air photographs where available. In the rest of the area in the south-west, sheets have been prepared by the same methods as used for G.S.G.S. 4347.

As in the case of other 1:25,000 series, sheets are being published at frequent intervals.



This series was photo-reproduced direct from the original Dutch 1 : 25,000 series, the British grid being added. The Dutch maps are highly coloured and very detailed and the reproduction of them in one colour is not very satisfactory, since it is often difficult to distinguish between roads, canals, etc. On some sheets many of the names are obscure and the detail difficult to read.

All sheets of the series are available but they are being superseded by sheets of G.S.G.S. 4427.



G.S.G.S. 4427, HOLLAND, 1 : 25,000 (Sample below)

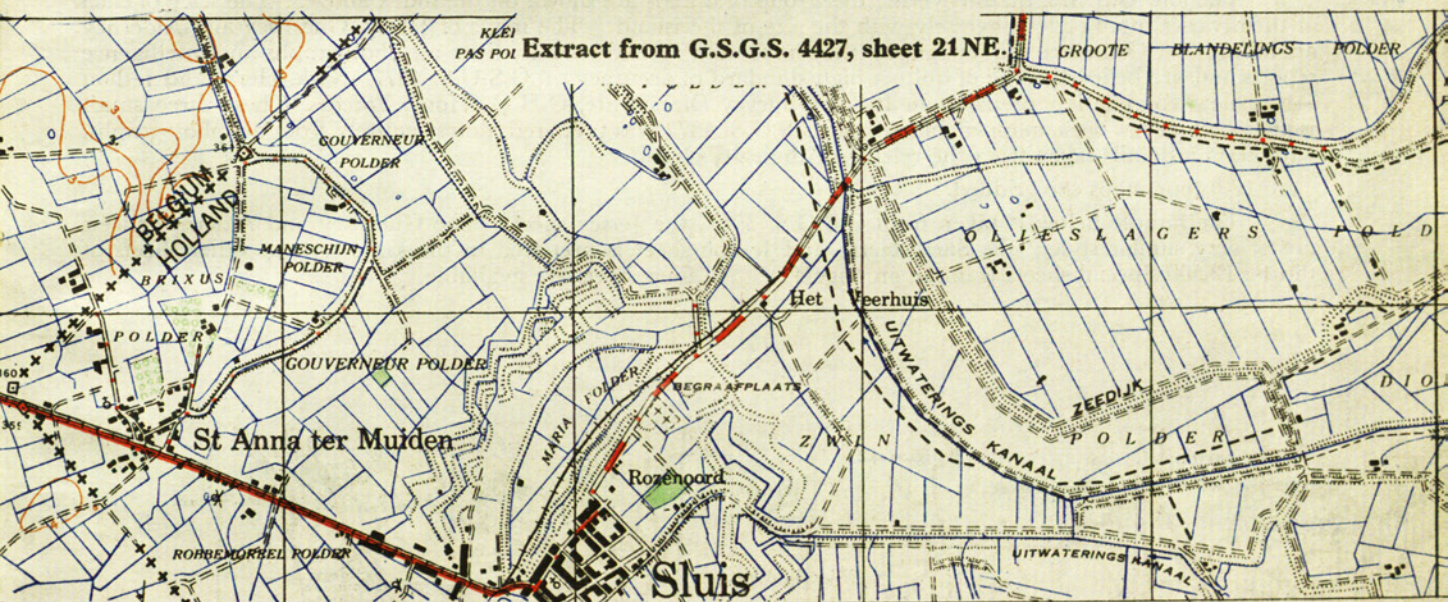
This series is being prepared in Washington to supersede G.S.G.S. 4096. It is based on different sheet lines from G.S.G.S. 4096 and is being entirely redrawn.

Sheets of this series have been taken from most recent Dutch 1 : 25,000 sheets brought up to date with air photographs which cover most of the country. In areas where no air photographs are available or for features which cannot be interpreted from air photographs, revision information has also been incorporated from Dutch 1 : 50,000 and 1 : 200,000 originals where these are more recent than the Dutch 1 : 25,000 sheets. Roads have been classified on the standard width basis adopted for Holland. The map is believed to be fairly accurate and is certainly extremely clear and legible.

Precise sheet lines of the series are shown on the index at the back, while that on page 22 shows the general area covered by the series.

It will be noticed that the series extends east only to 6° E. of Greenwich, and that the area of Holland east of this line is covered by G.S.G.S. 4414, the German 1 : 25,000 series. In fact, however, the German original sheets are skeleton or blank outside Germany itself and the sheets of G.S.G.S. 4414 in Holland are redrawn in precisely the same style and method as sheets of G.S.G.S. 4427 but are on the sheet lines of G.S.G.S. 4414.

While no sheets of this series are available at the moment, a large block of sheets in the coastal area should arrive shortly from America.



G.S.G.S. 4414, GERMANY, 1 : 25,000

It has been mentioned above that the part of this series which joins up with G.S.G.S. 4427 (Holland 1 : 25,000) and which covers the east of Holland is being prepared in the same style and method as G.S.G.S. 4427. Inside Germany, G.S.G.S. 4414 is copied direct from sheets of the existing 1 : 25,000 series. Sheets are being initially prepared in black only but since most of the German 1 : 25,000 originals are also published in black only the series remains perfectly legible. (Sheets may later be produced printed in brown with roads overprinted in red and water in blue.) All sheets have been designed for printing in the field.

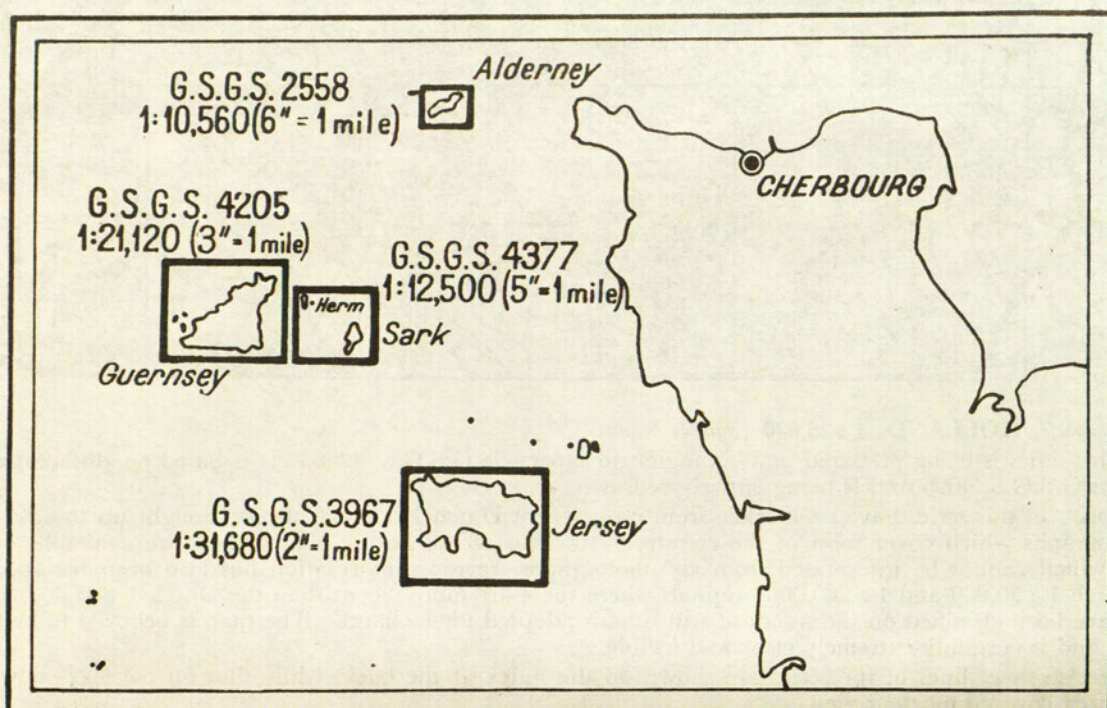
No revision of any sort is being incorporated into sheets of this series in Germany at this initial stage of production; revision to specific sheets will be undertaken as occasion demands, probably in the field. The accuracy of the basic maps now being reproduced obviously varies with the date of the original sheet (given at the bottom right corner of sheets). The average date of the German 1 : 25,000 originals is 1930.

About 150 sheets of this series, mostly in Western Germany, are now available out of the 4,000 odd sheets involved.

G.S.G.S. 4228, ITALY, 1 : 25,000

This series is fully described in "Notes on G.S.G.S. Maps of Italy." It is a direct reproduction of the Italian 1 : 25,000 series (another single colour map). All sheets of this series are now available, though revision of specific sheets is being carried out both in A.F.H.Q. and in Italy as occasion demands. As the index on page 22 shows, the whole of north-west Italy is covered on this series.

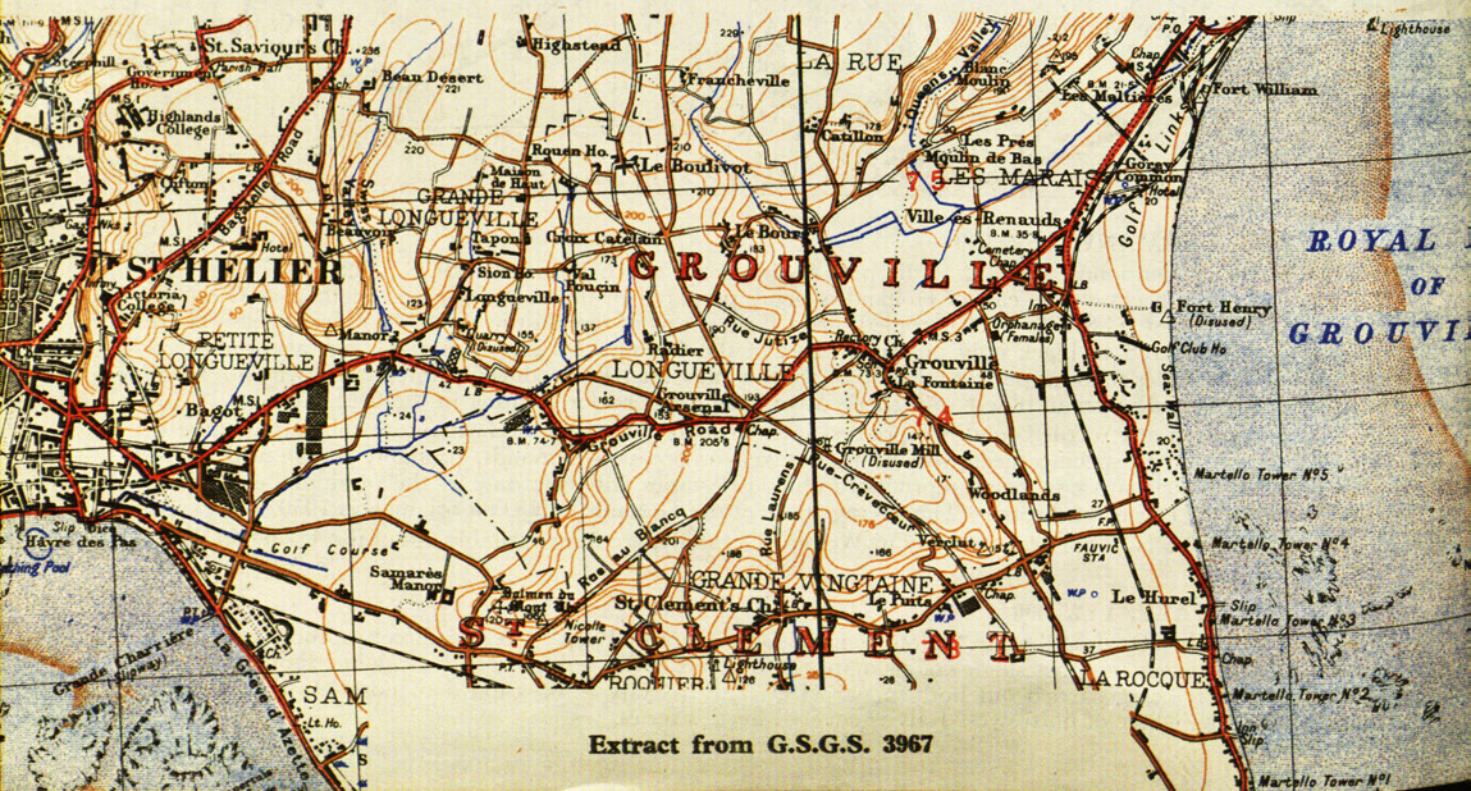
CHANNEL ISLANDS

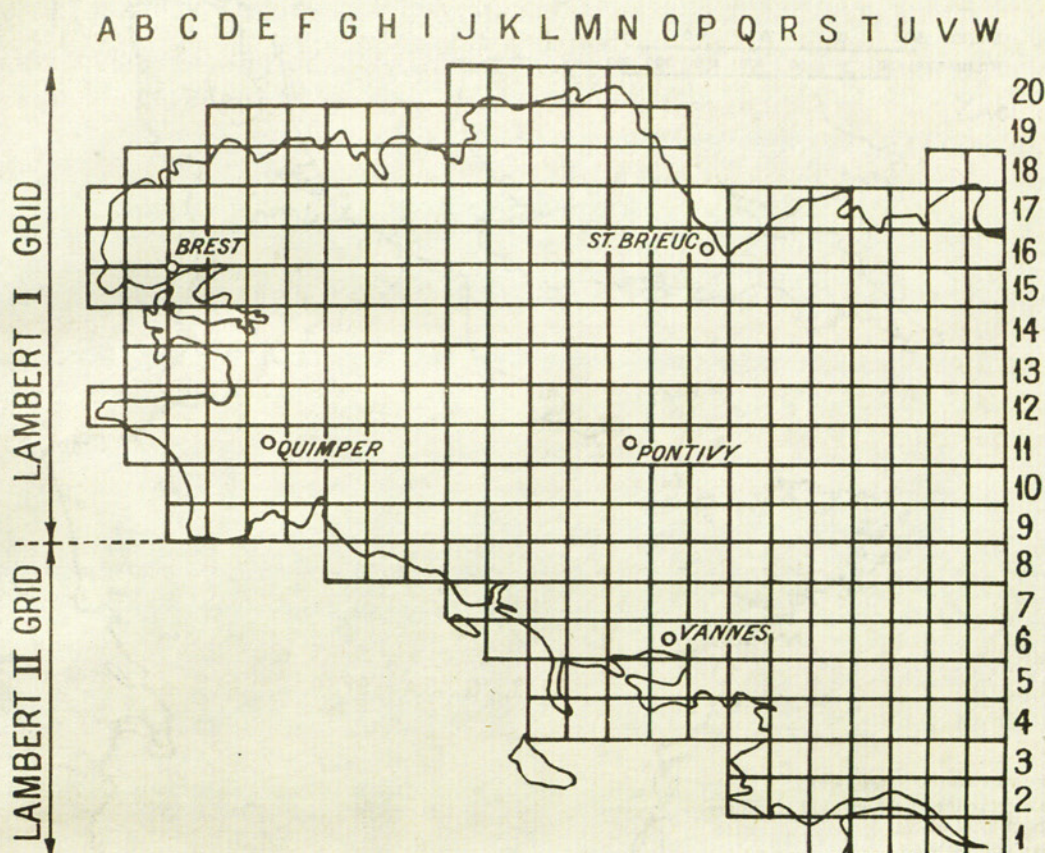


The four G.S.G.S. maps covering this group of islands are shown on the index above. The scale of each of them varies more or less inversely with the size of the island. The maps of Jersey, Guernsey and Alderney are all pre-war Ordnance Survey maps: they have been revised recently from air photographs and intelligence reports and are believed to be of quite a high standard of accuracy. G.S.G.S. 4377—Sark, Herm and Jethou—is a new compilation prepared in 1942 by Survey Directorate, G.H.Q. Home Forces. These three small islands had never been mapped before and G.S.G.S. 4377 was prepared almost entirely from air photographs, with certain details taken from the relevant Admiralty chart.

All four maps are gridded.

The sample below is taken from G.S.G.S. 3967, the Jersey sheet. The Guernsey and Alderney sheets are of very similar style: the Sark, Herm and Jethou sheet is prepared in the same style as other sheets of the 1:12,500 Special sheets (sample on page 41). All four sheets are available.



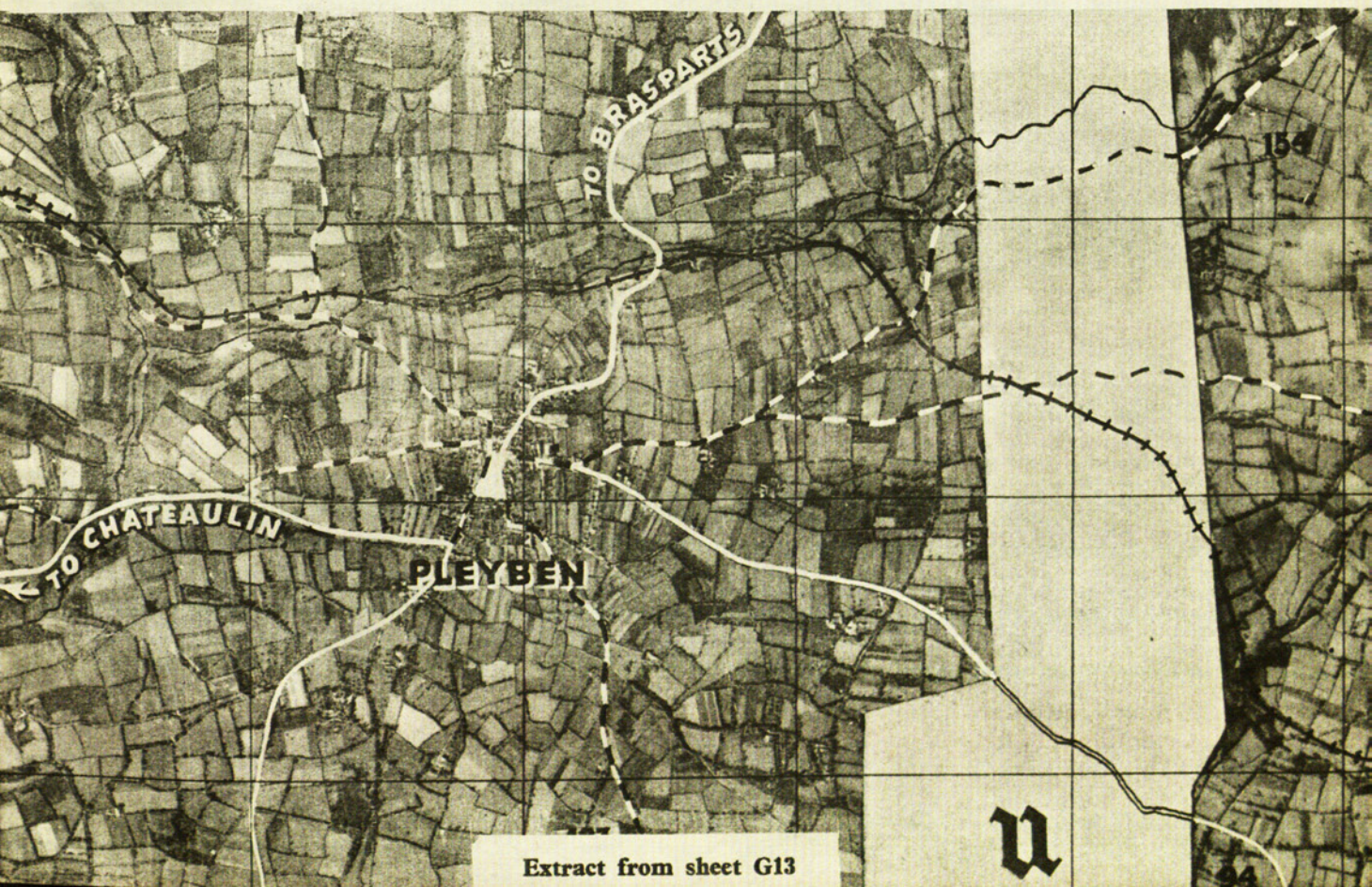


This series consists of the best quality air photographs, rectified as necessary for tilt distortion and patched up in mosaic form to a standard grid. The exact positions of certain points are known, e.g. trig. points; these points are plotted on the grid and the equivalent points on the air photographs are made to fit this framework control. In this way a comparatively accurate map, more accurate than the normal mosaic, is produced. Comparison of these sheets against certain sheets of G.S.G.S. 4347 has confirmed their accuracy.

The chief disadvantages of this type of map (which can of course only be prepared for areas where suitable and continuous air cover is available) are that it is comparatively difficult to read or interpret sheets without previous experience in interpreting air photographs, that relief is not shown and that gaps in the cover or places where detail is obscured by cloud have to be left blank. It will be noticed, from the sample below, that certain important names are added and that principal roads are specially picked out.

In spite of the great detail which these maps show they are not in any way a substitute for a good 1 : 25,000 series and, in this case, they have been produced merely as a 'stop-gap' until sheets of G.S.G.S. 4347 in this area are available, when the photo-maps will become obsolete. The sheet lines of this series are almost identical with those of G.S.G.S. 4347, but are square instead of rectangular, so that an east-west row of three photo-maps covers the area of two equivalent sheets of G.S.G.S. 4347.

Sheets are numbered on the letter-number system (e.g. E10); letters and numbers being shown on the index. All sheets are now available.



TOWN PLANS



Numbers key the towns to the index below.

Plans which have been redrawn shown thus*: others are direct copies of local plans.

Brackets mean plan still in hand.

All plans are 1st Editions except where otherwise stated.

G.S.G.S. 4234, FRANCE, TOWN PLANS

Aix-en-Provence	79	Fougères <i>Prov. Edn.</i>	41	Paimboeuf* <i>Misc. 16</i>	57
Alençon <i>Prov. Edn.</i>	42	(Granville*)	33	(Paris)	26
(Angers)	59	Grasse <i>Prov. Edn.</i>	82	Pau <i>Prov. Edn.</i>	90
(Arcachon*)	74	(Gravelines*)	2	Perros-Guirec*	29
Arles	78	(Grenoble)	72	Perpignan	96
Avignon <i>Prov. Edn.</i>	75	Hyères	94	Port de Bouc-Martigues*	85
(Belfort)	63	(La Ciotat*)	92	(Port St. Louis*)	86
(Benodet*)	46	La Pallice*	66	(Port Vendres*)	97
(Besançon)	62	La Rochelle*	67	(Quimper*)	45
Béziers	91	La Turballe* <i>Misc. 16</i>	53	(Reims)	18
(Binic*)	36	Le Havre* <i>3 sheets</i>	15	Rennes <i>G.S.G.S. 4302</i>	43
Bordeaux*	73	Le Poulguen* <i>Misc. 16</i>	54	(Rochefort*)	68
Boulogne*	4	(Les Sables d'Olonne*)	64	Rouen*	17
Brest*	40	Le Tréport* <i>2nd Edn.</i>	9	Rouen*—port plan <i>Misc. 68</i>	
Caen <i>Prov. Edn.</i>	24	Lézardrieux	30	Royan	71
Calais*	3	(Lille-Tourcoing-Roubaix*)	6	(St. Briec*)	38
(Cancale*)	35	Lisieux <i>Prov. Edn.</i>	25	St. Helier*	23
Cannes	83	(Loctudy*)	48	St. Malo*	34
(Charleville-Mezières)	13	Lorient & Keroman*	49	St. Nazaire*	55
Cherbourg* <i>3rd Edn.</i>	19	(Lyon)	70	(St. Omer)	5
(Clermont-Ferrand)	69	Marseille* <i>2 sheets</i>	87	(St. Quentin)	11
Concarneau*	47	Monaco & Monte Carlo	81	(Strasbourg)	28
Corseulles*	20	Montpellier	84	St. Valéry-en-Caux* <i>Misc. 16</i>	12
(Dahouet*)	37	Morlaix*	39	St. Valéry-sur-Somme*	8
Deauville-Trouville*	16	(Mulhouse)	52	Sète	88
(Dieppe*)	10	(Nancy)	27	Toulon* <i>2nd Edn.</i>	93
(Dijon)	61	(Nantes*)	58	(Toulouse)	89
(Dives-Cabourg-Houlgate*)	22	Narbonne	95	Tours	60
Donges*—plan of port— <i>Misc. 21</i>	56	Nice	80	(Tréguier*)	31
Douarnenez-Tréboul*	44	Nîmes	77	Vannes*	50
Dunkerque*	1	(Orléans)	51	Vence <i>Prov. Edn.</i>	76
Etaples*	7	Ouistreham*	21	(Vichy)	65
Fécamp*	14	(Paimpol*)	32		

G.S.G.S. 4420, BELGIUM, TOWN PLANS

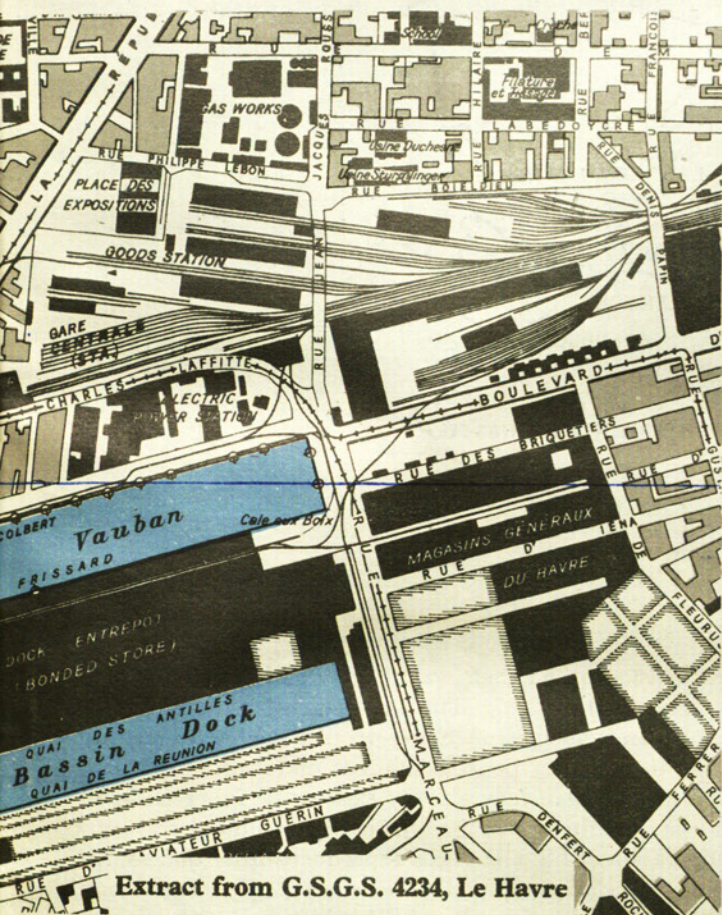
(Albert Plage-Knocke-Le Zoute*)	2	(Charleroi)	13	(Mons)	12
Antwerp, <i>Anvers</i>	8	(Ghent, <i>Gand</i>)	7	(Namur)	14
(Antwerp, * port plan)		(Ghent, * port plan)		(Nieupoort*)	6
(Blankenberghe*)	3	(Liège)	11	(Ostend, * <i>Ostende</i>)	4
(Bruges*)	5	(Louvain)	9	(Zeebrugge*)	1
(Brussels, <i>Bruxelles</i>)	10	(Luxembourg)	15		

G.S.G.S. 4458, HOLLAND, TOWN PLANS

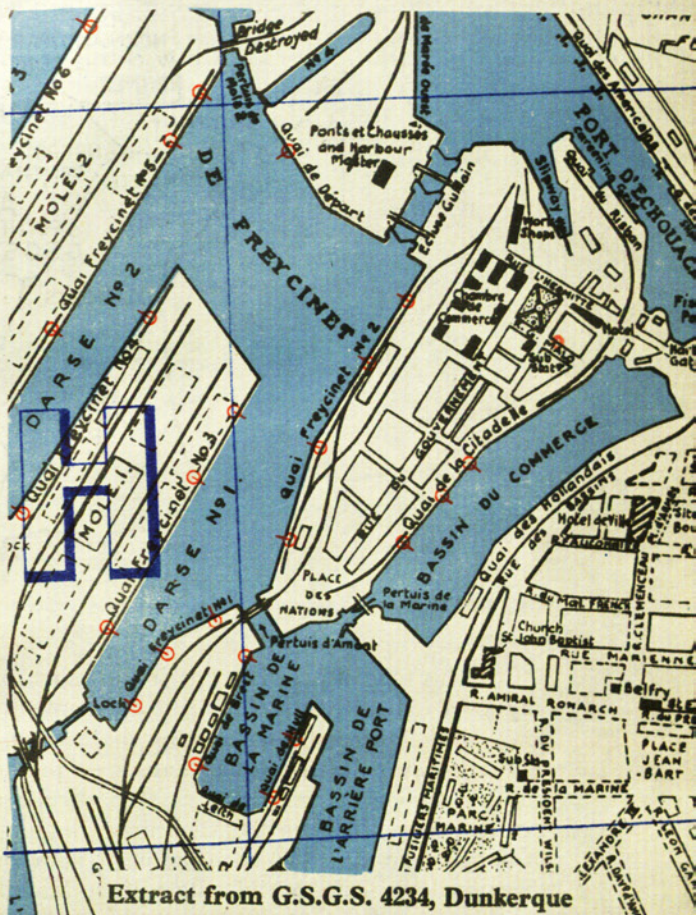
(Amsterdam*)	5	(Ijmuiden, * port plan)		(Rotterdam)	11
(Breskens*)	15	(The Hague, * <i>s Gravenhage</i>)	9	(Rotterdam, * port plan)	
(Delfzijl*)	1	(Harlingen*)	2	(Scheveningen*)	8
(Dordrecht*)	12	(Den Helder*)	3	(Terneuzen*)	16
(Flushing, * <i>Vlissingen</i>)	14	(Hook of Holland, * <i>Hoek van Holland</i>)	10	(Tilburg)	13
(Haarlem, Ijmuiden & Velsen)	4	(Leiden)	7	(Utrecht)	6

The lists opposite show those plans now either published or in hand. It must, however, be emphasized that in all probability many additional plans will be prepared, as well as new editions of existing ones. More than anything else in these notes, these lists of plans are provisional and both index and lists should constantly be kept up to date.

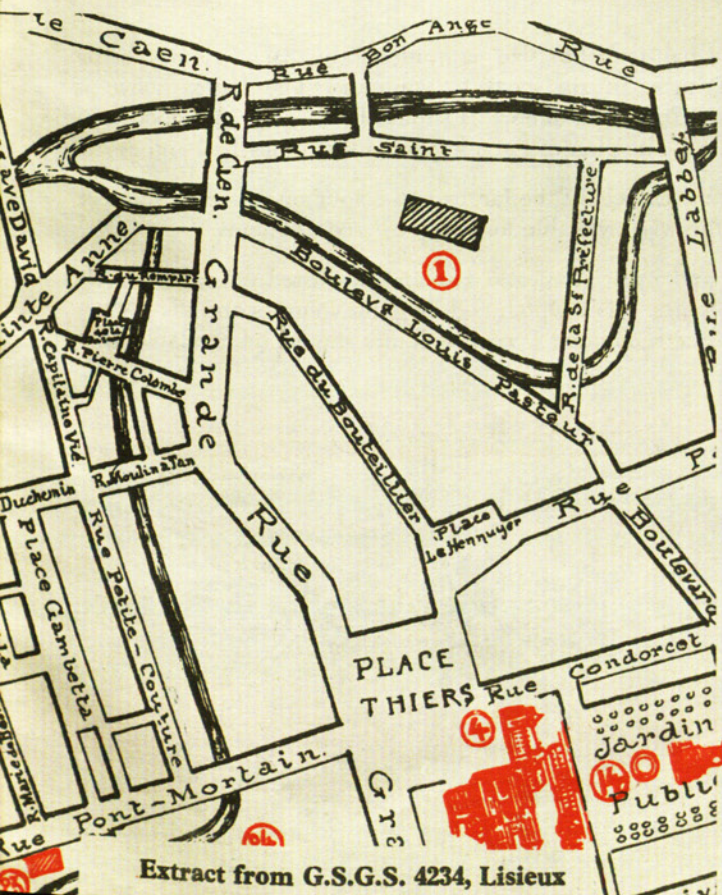
Attention must be drawn to the wide variety of style and accuracy of plans and the four samples below cover the range fairly typically. The top left sample, an extract from the three sheet plan of Le Havre, is typical of the best type of plan and was carefully prepared from air cover, a variety of local plans, port details and other intelligence. The top right sample is an extract from the plan of Dunkerque, prepared by I.S.T.D. (who have prepared or have assisted in the preparation of many of the plans in this area). The bottom left sample is taken from the plan of Lisieux and forms an example of a plan copied direct from a crude local publication with no pretention of being anything more than a street diagram. The bottom right sample, from the plan of Antwerp, illustrates a type of plan based on a good local original which has been revised from air photographs and ground intelligence. It should be noted that C.I.U., as well as I.S.T.D., have co-operated in the preparation of some of these town plans.



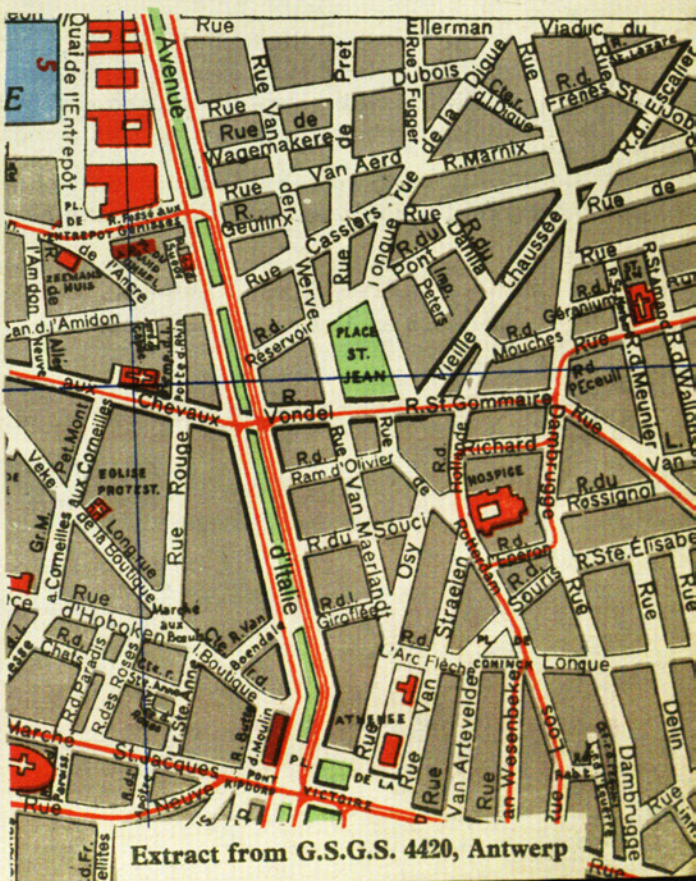
Extract from G.S.G.S. 4234, Le Havre



Extract from G.S.G.S. 4234, Dunkerque

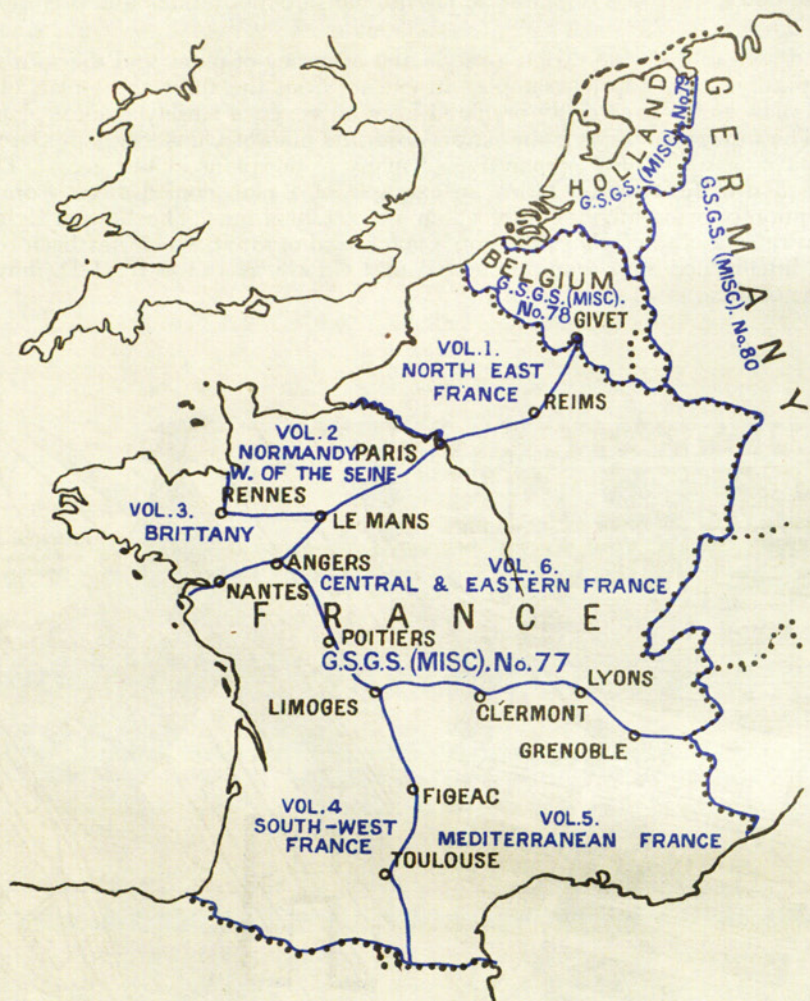


Extract from G.S.G.S. 4234, Lisieux



Extract from G.S.G.S. 4420, Antwerp

THROUGH-WAY TOWN PLANS

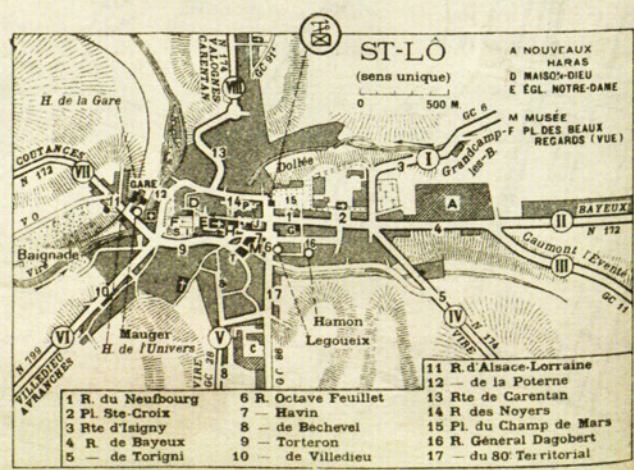
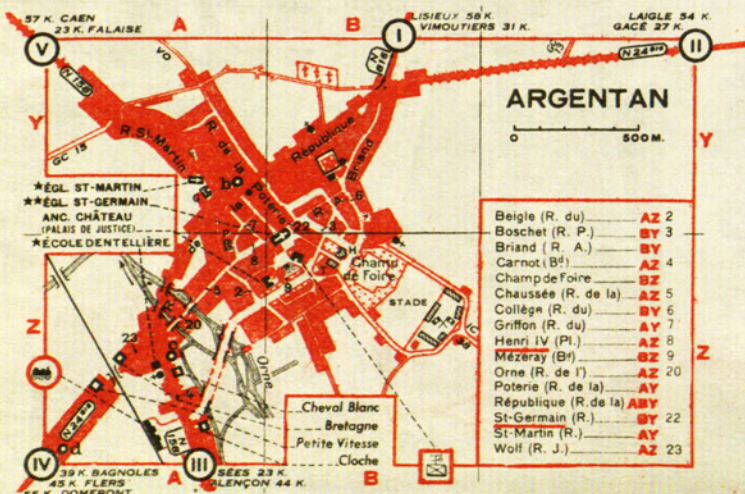


This type of plan is primarily intended to assist drivers to find their way quickly and directly through any town. It therefore requires to be simple in style and small in size. This 'movement' requirement for town plans is generally not met by the normal type of plan, which is often too detailed and too unwieldy. Through-way plans have, therefore, been produced for the greatest possible number of towns in the area, notwithstanding the fact that for any particular town a normal plan may already exist or be in preparation. For France and Belgium the Michelin guides supply a vast quantity of just the type of plan required and most of the plans in these two countries have, with the co-operation of I.S.T.D., been reproduced from that source. (See samples.) A further advantage of the Michelin plan is its relationship to the Michelin 1 : 200,000 road map, reproduced as G.S.G.S. 4238 (see page 36). In Holland a variety of small guide book type plans have been used as bases.

All the plans are available in small (generally half-foolscap) size pamphlet form, each country being treated in a volume of its own or, in the case of France, in six separate volumes. The index above is primarily included to show the areas covered by the six French volumes. It should be noted that a good deal of overlapping between volumes has been introduced, e.g. the plan of Paris appears in volumes 1, 2 and 3.

It is also worth emphasis that many of the plans, especially the larger two-colour ones, are of value as a normal type of town plan, where no such plan is otherwise available for "static" requirements.

All plans involved in the six French volumes and in Belgium and Holland are listed on pages 31-34. Similar plans of Germany are covered in two other volumes. The Dutch and Belgium volumes and the French volumes 2, 3 and 5 have just been published : the three remaining French volumes should be available very shortly.



G.S.G.S. (Misc.) No. 77, FRANCE : Thoroughway Town Plans, Volume 1

Abbeville	Elbeuf	Neufchatel-en-Bray
Aire	Enghien-les-Bains	Neuilly Plaisance
Albert	Etaples	Noeux
Amiens	Etretat	Noyon
Andelys (Les)	Essonnes	
Anzin	Eu	Paris
Ardres		Péronne
Argenteuil	Fécamp	Petit-Quevilly (Le)
Armentières	Fère (La)	Pierrefonds
Arras	Fismes	Pont-de-l'Arche
Athis-Mons	Forges-les-Eaux	Pontoise
Audruicq	Fourmies	
Auffay	Fumay	Quesnoy (Le)
Aulnay-sous-Bois		
Aumale	Gisors	Raincy
Avesnes	Givet	Reims
Avion	Gournay	Rocroi
	Guise	Rosendael
Bailleul		Roubaix
Bapaume	Ham	Rouen
Bavai	Halluin	Roye
Beaumont-sur-Oise	Harnes	Rueil-Malmaison
Beauvais	Haubourdin	
Berck-Plage	Hautmont	St. Amand
Bergues	Havre (Le)	St. Cloud
Béthune	Hazebrouck	St. Denis
Bezons	Hellemmes-Lille	St. Omer
Blanc-Mesnil	Hénin-Liétard	St. Pol-sur-Mer
Bohain-en-Vermandois	Hesdin	St. Pol-sur-Ternoise
Bolbec	Hirson	St. Quentin
Boulogne	Houilles	St. Valéry-en-Caux
Breteuil-sur-Noye		Ste. Adresse
Bruay-en-Artois	Isle-Adam (L')	Sallaumines
		Sannois
Calais	Lambersart	Sanvic
Cambrai	Laon	Sartrouville
Capelle (La)	Lens	Savigny-sur-Orge
Carvin	Liévin	Seclin
Cassel	Lille	Senlis
Cateau (Le)	Lillebonne	Sevran
Caudebec-en-Caux	Lillers	Sèvres
Caudry	Livry Gargan	Sin-le-Noble
Chantilly	Lomme	Soissons
Château-Thierry	Loos-lès-Lille	Sotteville-lès-Rouen
Chatou		
Chauny	Madeleine (La)	Touquet (Le)
Chaville	Malo	Tourcoing
Clermont	Maisons-Lafitte	Tréport (Le) & Mers
Clermont	Marle	
Compiègne	Marcq-en-Baroeul	Valenciennes
Condé-sur-l'Escaut	Marles	Vernon
Conflans Ste. Honorine	Marquise	Vervins
Corbies	Maubeuge	Vésinet (Le)
Coudekerque-Branche	Meaux	Veules-les-Roses
Creil	Méru	Villeneuve-le-Roi
Crépy-en-Valois	Meudon	Villeneuve-St. Georges
Croix	Meulan	Villers-Cotterets
	Montdidier	Viroflay
Denain	Montmorency	
Dieppe	Montreuil-sur-Mer	Wasquehal
Douai	Mouvax	Wattrelos
Doullens		
Duclair		Yvetot
Dunkerque		

FRANCE : Thoroughway Town Plans in Volume 2

Alençon	Falaise	Orbec
Antrain	Ferté-Bernard (La)	Ouistreham
Argentan	Ferté-Macé (La)	
Avranches	Flers	Pacy-sur-Eure
	Fougères	Paris
		Poissy
Bagnoles-de-l'Orne	Gacé	Pont-Audemer
Bayeux	Granville	Pont-de-l'Arche
Bellême		Pont-l'Évêque
Bernay	Honfleur	Pontorson
Breteuil-sur-Iton	Houdan	Pré-en-Pail
Briquebec	Houlgate	
Brionne		Rambouillet
		Rennes
Cabourg	Laigle	Rouen
Caen	Laval	
Carentan	Lions-sur-Mer	St. Aubin-sur-Mer
Carteret	Lisieux	St. Germain-en-Laye
Chartres	Longy-au-Perche	St. Lô
Cherbourg	Loupe (La)	St. Sauveur-le-Vicomte
Conches	Louviers	St. Vaast-la-Hougue
Condé-sur-Noireau	Luc-sur-Mer	Sées
Courseulles-sur-Mer		Senonches
Courville	Maintenon	Sillé-le-Guillaume
Coutances	Maisons-Lafitte	
	Mamers	Tinchebray
Deauville-Trouville	Mans (Le)	
Dol	Mantes	Valognes
Domfront	Mayenne	Verneuil
Dreux	Meulan	Vernon
	Mortagne	Versailles
Elbeuf	Mortain	Villedieu-les-Poêles
Epernon		Villers-sur-Mer
Ernée	Neubourg (Le)	Vimoutiers
Evreux	Nogent-le-Rotrou	Vire
Evron		Vitré

FRANCE : Throughway Town Plans in Volume 3

Ancenis	Hennebont	Pont-l'Abbé
Angers	Huelgoat	Pontorson
Antrain		Pornic
Audierne	Josselin	Pouliguen (Le)
Auray		
	Lamballe	Quiberon
Batz	Landerneau	Quimper
Baule (La)	Landivisiau	Quimperlé
Bénodet	Lannion	
Brest	Laval	
	Lesneven	Redon
Cancalle	Locronan	Rennes
Carantec	Lorient	Roche-Bernard (La)
Carhaix	Loudéac	Roscoff
Château-Gontier		Rostrenen
Châteaubriant	Mans (Le)	
Châteaulin		Sablé
Châteauneuf-du-Faou	Montfort-sur-Meu	St. Brieuc
Combourg	Morlaix	St. Cast
Concarneau		St. Lunaire
Croisic (Le)	Nantes	St. Malo, etc.
	Nozay	St. Nazaire
Dinan		St. Pol-de-Léon
Dinard	Paimboeuf	St. Quay-Portrieux
Dol	Paimpol	Segré
Douarnenez	Palais (Le)	
	Perros-Guirec	
Faouet (Le)	Ploërmel	Tréguier
Flèche (La)	Plougastel-Daoulas	
	Pont-Château	
Guérande	Pontivy	Vannes
Guingamp		Vitré

FRANCE : Throughway Town Plans in Volume 4

Agen	Fleurance	Paimboeuf
Aire-sur-l'Adour	Foix	Pamiers
Ancenis	Fontenay-le-Comte	Parthenay
Angers	Fouras	Pau
Angoulême		Périgueux
Arcachon	Gourdon	Poitiers
Argelès-Gazost		Pons
Arreau	Hendaye	Pouzauges
Auch	Hossegor	
Ax-les-Thermes	Isle-Jourdain (L')	Réole (La)
		Riberac
Bagnères-de-Bigorre	Jarnac	Rochechouart
Barbezieux	Jonzac	Rochefort
Bayonne		Rochevoucauld (La)
Bazas	Lectoure	Rochelle (La)
Bellac	Lesparre-Médoc	Roche-sur-Yon (La)
Belvès	Libourne	Royan
Bergerac	Limoges	Ruffec
Biarritz	Lombez	
Blaye	Loudun	Sables d'Olonne (Les)
Bordeaux	Lourdes	St. Bertrand-de-Comminges
Bressuire	Luchon	St. Emilion
Brive	Luçon	St. Céré
Brouage		St. Gaudens
	Marennes	St. Girons
Cahors	Marmande	St. Jean d'Angély
Cambo-les-Bains	Maubourguet	St. Jean-de-Luz
Casteljaloux	Mauléon-Licharre	St. Jean-Pied-de-Port
Castelsarrasin	Melle	St. Junien
Castillon-sur-Dordogne	Miramont	St. Maixent
Caussade	Mirande	St. Sever-sur-l'Adour
Cauterets	Mirebeau	St. Yrieix
Challans	Moissac	Ste. Foy-la-Grande
Chalus	Mont-de-Marsan	Saintes
Châteauneuf-sur-Charente	Montauban	Salies-de-Bearn
Chef-Boutonne	Montrejeau	Sarlat
Cholet	Montreuil-Bellay	Saujon
Civray	Murat	Saumur
Clisson	Muret	
Cognac		Tarascon-sur-Ariège
Condom	Nantes	Tarbes
Confolens	Nérac	Thouars
	Niort	Tonneins
Dax	Nontron	Toulouse
		Tulle
Eaux Bonnes (Les)	Oleron-St. Marie	Villeneuve-sur-Lot
Figeac	Orthez	

FRANCE : Throughway Town Plans in Volume 5

Agde	Barcelonnette	Cadenet
Aigues-Mortes	Baux (Les)	Cahors
Aix-en-Provence	Beaucaire et Tarascon	Cannes
Albi	Beaulieu et St. Jean Cap Ferrat	Carcassonne
Alès	Beaurepaire	Carcès
Ambert	Bédarieux	Carmaux
Amélie-les-Bains	Besse-en-Chandesse	Carpentras
Annonay	Béziers	Cassis
Antibes	Boën-sur-Lignon	Castellane
Apt	Bollène	Castelnaudary
Arbresle (L')	Bonnieux	Castres
Arles	Bourboule (La)	Caussade
Aubagne	Bourganeuf	Cavaillon
Aubenas	Bourg-Argental	Céret
Aubusson	Bourgoin	Ciotat (La)
Aurillac	Bourg St. Andéol	Clermont-Ferrand
Avignon	Briançon	Clermont-l'Hérault
Ax-les-Thermes	Brignoles	Cogolin
	Brioude	Crest
	Brive	

Decazeville
Die
Digne
Draguignan

Embrun
Entraygues
Espalion

Figeac
Firminy
Florac
Foix
Forcalquier
Fréjus

Gaillac
Gannat
Gap
Givors
Graulhet
Grasse
Grenoble

Hyères

Issoire

Juan-les-Pins

Lamastre
Largentière
Lavaur
Lavandou (Le)
Lézignan Courbières
Limoges
Limoux
Lodève
Lunel
Lyon

Manosque
Marseille
Martigues
Marvejols
Mauriac
Mazamet
Mende

Menton
Millau
Mirepoix
Montauban
Montbrison
Mont Dore (Le)
Monte Carlo-La Condamine-Monaco
Montélimar
Montpellier
Moulins
Meymac
Moustiers-St. Marie
Mure (La)

Narbonne
Nice
Nîmes
Nyons

Orange

Pamiers
Pernes-les-Fontaines
Perpignan
Pézenas
Pontgibaud
Pont-St. Esprit
Prades
Privas
Puget-Théniers
Puy (Le)

Quillan

Revel
Riez
Riom
Rodez
Romans

St. Affrique
St. Céré
St. Chamond
St. Chély-d'Apcher
St. Etienne

St. Flour
St. Gilles
St. Marcellin
St. Maximin-la-Ste. Baume
St. Paul-de-Fenouillet
St. Pons
St. Pourçain-sur-Sioule
St. Raphaël
St. Rémy-de-Provence
St. Tropez
St. Yrieux
Ste. Maxime
Saintes-Maries-de-la-Mer (Les)
Salon-de-Provence
Saugues
Sète
Sisteron
Sospel

Tain-l'Hermitage et Tournon
Tarare
Tarascon-sur-Ariège
Thiers
Toulon
Toulouse
Tour-du-Pin (La)
Tulle
Turbie (La)

Uriage-les-Bains
Ussel
Uzès

Vaison-la-Romaine
Valence
Valréas
Vals-les-Bains
Vernet-les-Bains
Vic-le-Comte
Vic-sur-Cère
Vichy
Vienne
Vigan (Le)
Villefranche-de-Lauragais
Villefranche-de-Rouergue
Villeneuve-lès-Avignon
Voiron

Yssingeaux

FRANCE : Throughway Town Plans in Volume 6

Aix-les-Bains
Albertville
Allevard
Altkirch
Amboise
Ammerschwihl
Angers
Annecy
Annamasse
Arbois
Arbresle (L')
Arcis-sur-Aube
Argenton-sur-Creuse
Arnay-le-Duc
Arpajon
Aubigny-sur-Nère
Aubusson
Audincourt
Autun
Auxerre
Avallon

Bains-les-Bains
Barr
Bar-le-Duc
Bar-sur-Aube
Bar-sur-Seine
Baugé
Baume-les-Dames
Beaune
Beaune
Belfort
Bellac
Bellegarde
Belley
Besançon
Bischwiller
Blanc (Le)
Blois
Boën-sur-Lignon
Bonneval
Bonneville
Bourbon-Lancy
Bourbon-l'Archambault
Bourbonne-les-Bains
Bourg-en-Bresse
Bourganeuf
Bourges
Bourgoin
Boussac
Brie-Comte-Robert
Briey
Brou
Bruyères

Cernay
Chablis
Chambéry
Chagny
Châlons-sur-Marne
Châlons-sur-Saône
Chamonix-Mont Blanc
Champagnole
Charité (La)
Charlieu
Charmes
Charolles
Chartre-sur-le-Loir (La)
Chartres
Château-Chinon
Châteaudun
Château-Renault
Châteauroux
Château-Salins
Château-Thierry
Châtel-Guyon
Châtellerauld
Châtillon-sur-Chalaronne
Châtillon-sur-Indre
Châtillon-sur-Seine
Châtre (La)
Chaumont
Chelles
Chinon
Choisy-le-Roi
Clamecy
Clermont-Ferrand
Cloyes
Cluny
Colmar
Commeny
Commercy
Contréville
Corbeil
Corbigny
Cosne-sur-Loire
Coulommiers
Courville
Crécy-en-Brie
Creusot (Le)
Cusset

Decize
Dieuse
Digoïn
Dijon
Dole
Dorat (Le)
Dourdan
Dun-le-Palletau

Epernay
Epernon
Epinal
Etain
Etampes
Evaux-les-Bains
Evian-les-Bains
Fère-Champenoise
Ferté-Bernard (La)
Ferté-Gaucher (La)
Ferté-sous-Jouarre (La)
Flèche (La)
Fontainebleau
Fumay

Gallardon
Gannat
Gerardmer
Gex
Gien
Givet
Gray
Grenoble
Guebwiller
Guéret

Haguenau

Issoudun

Joigny
Joinville
Juvisy-sur-Orge

Kaysersberg

Lagny-sur-Marne
Langres
Lapalisie
Levroux
Lignières
Ligny-en-Barrois
Limoges
Loches
Longuyon
Longwy
Lons-le-Saunier
Loudun
Louhans
Lunéville
Lure
Luxeuil-les-Bains
Lyon

Maçon
Magnac-Laval
Maintenon
Mans (Le)
Meaux
Melun
Metz
Mezières-Charleville
Meyrueis
Milly
Mirebeau
Mirecourt
Molsheim
Montargis
Montbard
Montbéliard
Montceau-les-Mines
Montereau
Monterrand
Montluçon
Montmédy
Montmirail
Montmorillon
Montreuil-Bellay
Moret
Morhange
Morteau
Moulins
Moulins-Engilbert
Moutiers
Mulhouse
Munster

Nancy
Nangis
Nantua
Nemours
Neufchâteau
Nevers
Neuf-Brisach
Nogent-le-Rotrou
Nogent-sur-Seine
Nuits-St. Georges

Obernai
Orléans
Oyonnax

Paray-le-Monial
Paris
Pithiviers
Plombières
Poitiers
Poligny
Pont-à-Mousson
Pontarlier
Pont-sur-Yonne
Pouques-les-Eaux
Provins

Rambervillers
Rambouillet
Reims
Remiremont
Rethel
Revin
Ribeaupville
Richelieu
Riom
Riquewihr
Roanne
Roche-sur-Foron (La)
Rocroi
Romilly-sur-Seine
Romorantin
Rosheim
Rouffach
Rumilly

St. Amand-Montrond
St. Calais
St. Claude
St. Dié
St. Dizier
St. Florentin
St. Gervais-les-Bains
St. Honoré-les-Bains
St. Jean-de-Maurienne
St. Julien-en-Genevois
St. Junien
St. Mihiel
St. Pourçain-sur-Sioule
Ste. Menchould
Salins-les-Bain
Sancerre
Saumur
Sarrebouurg
Sarreguemines

Saverne
Sedan
Sélestat
Semur-en-Auxois
Sens
Sézanne
Schirmeck
Souterraine (La)
Stenay
Strasbourg
Sully-sur-Loire

Tarare
Thann
Thiers
Thionville
Thizy
Thonon-les-Bains
Tonnerre
Toul
Tour-du-Pin (La)
Tournus
Tours
Trévoux
Troyes
Turckheim

Valencay
Vatan
Vaucoulers
Vendeuvre-sur-Barse
Vendôme
Verdun
Versailles
Vesoul
Vézelay
Vichy
Vierzon
Villefranche (Rhône)
Villenauxe
Villeneuve-sur-Yonne
Villers-Cotterets
Vitry-le-François
Vittel
Voinon
Vouziers

Wasselonne
Wassy
Wissembourg

G.S.G.S. (Misc.) No. 78, BELGIUM : Throughway Town Plans

Albert Plage-Knocke-Le Zoute
Alost
Antwerp
Arlon
Ath
Audenarde

Bastogne
Binche
Blankenberghe
Bouillon
Bruges
Bruxelles

Charleroi
Chimay
Coutraï

Diest
Dinant

Eecloo
Eupen

Furnes

Ghent
Grammont

Hal
Hasselt
Heyst-sur-Mer
Huy

Liège
Lierre
Lokeren
Louvain
Louvrière (La)

Malines
Marche
Menin
Mons
Mouscron

Namur
Nivelles

Ostende

Péruwelz

Renaix
Roulers

St. Nicolas
St. Trond
Spa

Termonde
Thielt
Thourout
Thuin
Tirlemont
Tongres
Tournai
Turnhout

Verviers

Ypres

LUXEMBOURG

Dickirch

Ettelbruck

Luxembourg

G.S.G.S. (Misc.) No. 79, HOLLAND : Throughway Town Plans

Alkmaar
Amersfoort
Amsterdam
Apeldoorn
Arnhem
Assen

Baarn
Bergen-op-Zoom
Bolsward
Breda
Bussum

Delft
Deventer
Doesburg
Dordrecht

Eindhoven
Enkhuizen
Enschede

Flushing
Franeker

Gorinchem
Gouda
Groningen
Haarlem
Hague
Harlingen
Helder
's Hertogenbosch
Hilversum
Hoorn

Ijmuiden

Kampen

Leeuwarden
Leiden

Maastricht
Meppel
Middelburg

Nijmegen

Roermond
Rotterdam

Schiedam
Sneek
Steenwijk

Terneuzen
Tiel
Tilburg

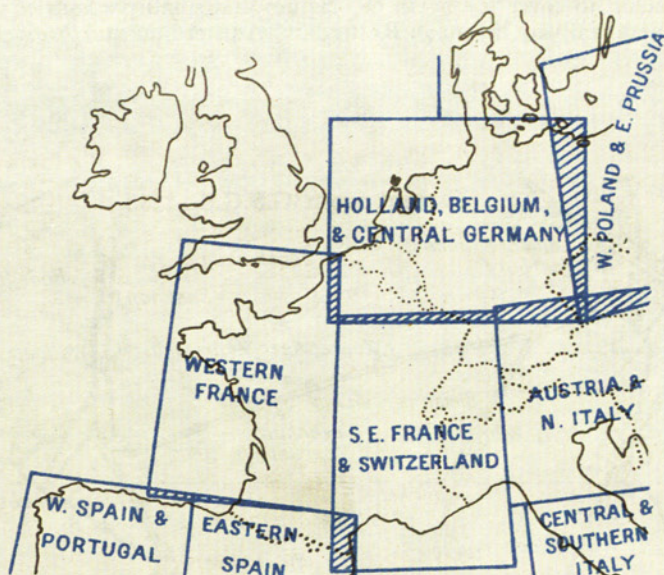
Utrecht

Valkenburg
Venlo
Vlaardingen

Zaandam
Zalt-Bommel
Zierikzee
Zutphen
Zwolle

COMMUNICATIONS MAPS

G.S.G.S. 4438, EUROPE COMMUNICATIONS, 1 : 800,000



This series has been taken from Bartholomew's 1 : 1,000,000 map of Europe which makes a very suitable basis. Roads have been plotted (entirely in red) according to their various national systems of road classification, in terms of width categories used on larger scale series (and described in detail on page 46).

Railways have been shown entirely in black and have been taken from the various official railway maps of the countries concerned, amended and brought up to date by the War Office Transportation section. All stations have been plotted (and are shown by short lines with circles at their ends) and the main layout of junctions and of multiple tracking has been shown exaggerated in scale.

Waterways (in dark blue) have been taken from the various foreign official waterway maps and classified in terms of the capacity of vessel that can use them.

Certain larger scale insets, e.g. of Paris on the Western France sheet, are shown where space permits.

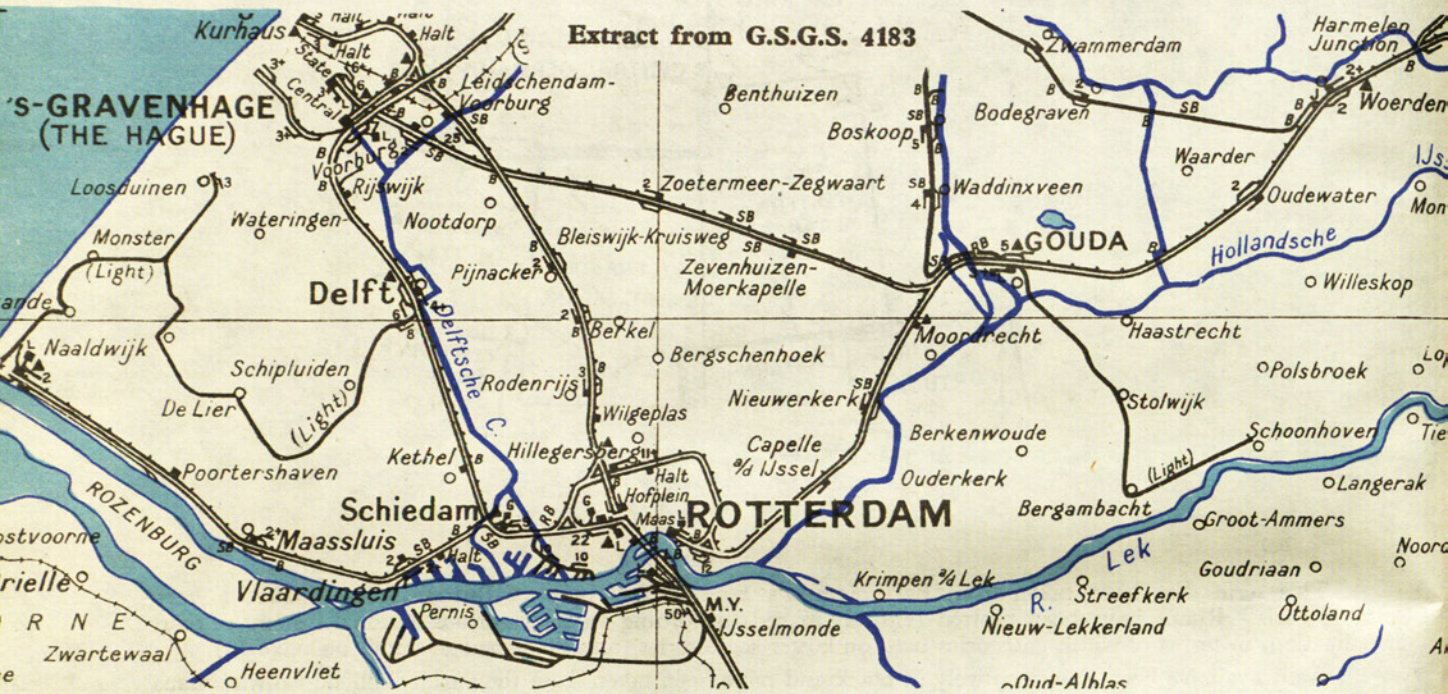
Separate editions of the map are printed showing only the base and the railways, the base and the roads, and the base and the waterways, in addition to the normal style as shown in the sample below.

All three sheets covering this area are now available.

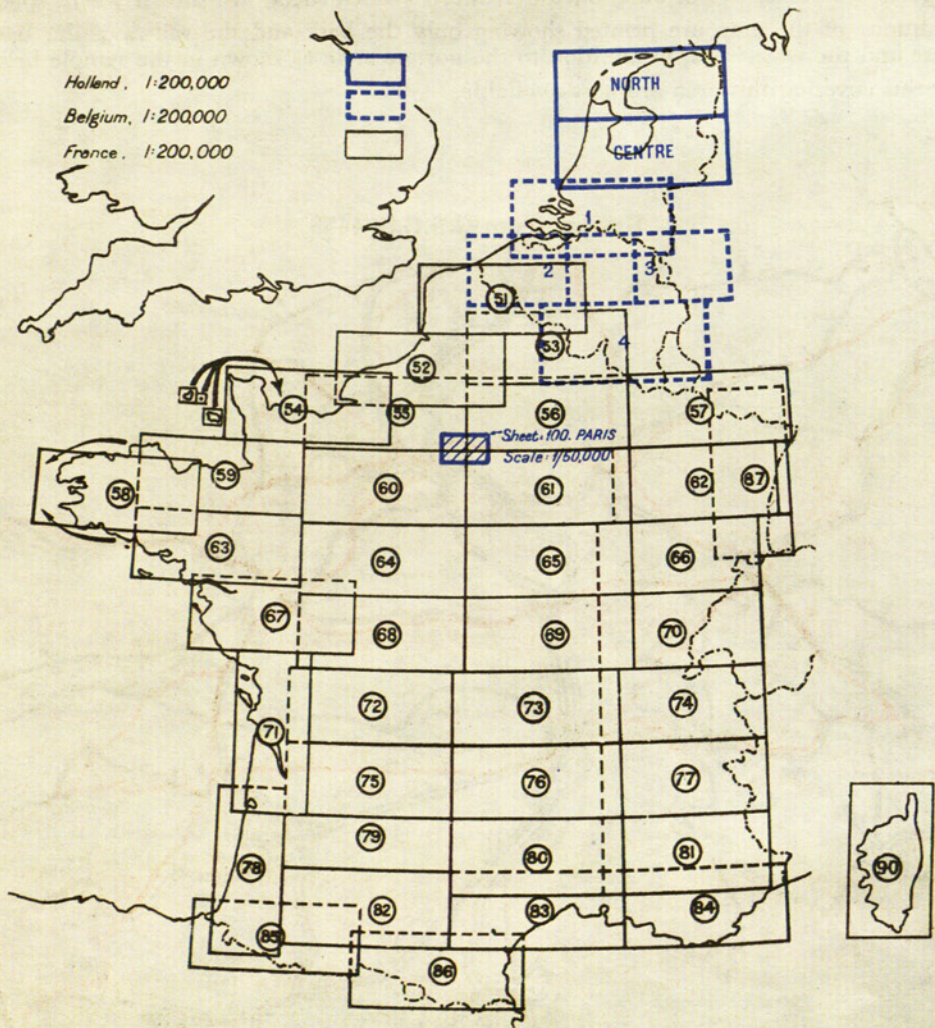


G.S.G.S. 4183, HOLLAND, Railways and Waterways, 1 : 300,000

This one-sheet map was prepared largely because no adequate local railway map of Holland existed. Railways were plotted from a variety of sources collated by railway experts and the emphasis of the map is primarily on railways. Specialised railway details, such as locomotive sheds, have been shown. Though prepared over two years ago, it is believed that the map is still substantially accurate and it has been used as the basis of railway classification in Holland on all medium and large scale G.S.G.S. maps. The sheet extends beyond Holland to cover the north of Belgium and small portions of western Germany. Larger scale insets giving the general railway layout in Rotterdam, Amsterdam and Antwerp are included.



G.S.G.S. 4238, ROAD MAP (Michelin), 1 : 200,000 (Sample opposite)



This series is a direct reproduction of the Michelin 1 : 200,000 road map series, unaltered in any respect, except that the reference has been translated into English. In France most of the Michelin sheets are dated 1938-39, while the originals of the two Dutch sheets were specially prepared for the Service Géographique de l'Armée in 1940 and thus incorporate very modern information. The Belgian sheets are earlier in date (1930 approx.) and, hence, are not quite up to the same high standard as the other sheets. The wealth of information that these maps give makes them of great value for M.T. uses. The close association between sheets of this series and the pamphlets of "Throughway plans" has been mentioned on page 30. (Roman figures in circles key main routes entering towns as between the throughways plans and the sheets of this series.) The considerable overlap between sheets should be observed.

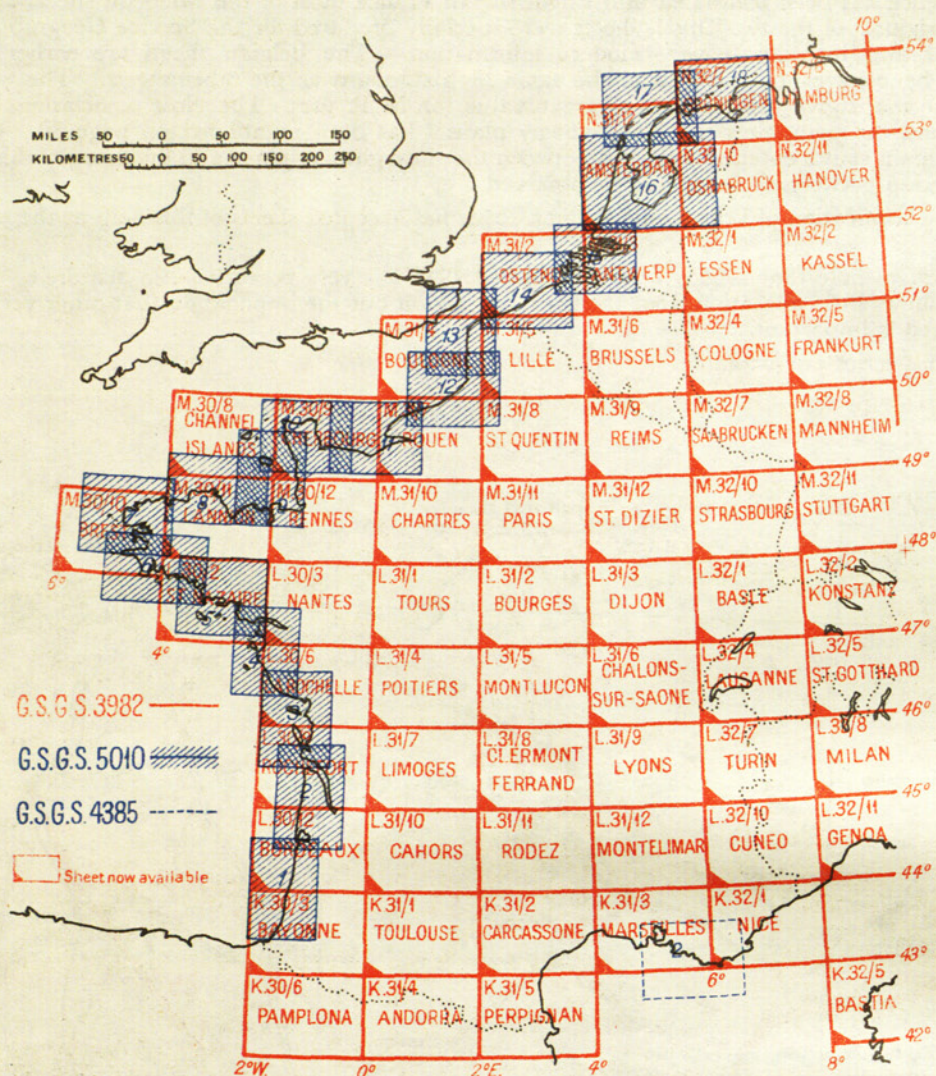
The system of classification of French and Belgian roads has accepted sheets of this map as the principal source.

(It is of interest to note that a copy of a sheet dated 1941 has very recently been acquired. In fact, this particular sheet shows little alteration from the previous edition but the implication that other very recent sheets may be captured is important.)

All sheets of this series are available.



AIR MAPS



These two pages are devoted to the various map series originally prepared exclusively for the use of Air Forces. It should be emphasized, however, on the one hand, that many of the normal G.S.G.S. series already described are also designed so as to be suitable for use in the air (especially, of course, the Army/Air style maps), and on the other hand, that the essentially air maps mentioned here may often be of value for various military purposes.

G.S.G.S. 4072, EUROPE (Air), 1:500,000 (Code AF) (This series is described fully on page 4.)

G.S.G.S. 3982, EUROPE (Air), 1:250,000 (Code AB) (See upper sample opposite)

In this area this series is more detailed than in most other continental areas, and is based on G.S.G.S. 2738 and G.S.G.S. 4042. The latest revision to G.S.G.S. 2738 and G.S.G.S. 4042 has not always been incorporated in G.S.G.S. 3982 but, except in presentation of woods, the series remains adequately accurate for air use. Coastal sheets are mostly in "Salmon and Shrimp" style, i.e. show marine depths in layer tints (see G.S.G.S. 5010 below); all coastal sheets will eventually be in this style. All sheets bear an overlap on the adjoining sheets of 10 minutes to the north and 15 minutes to the east (about 3 inches in each case). As in G.S.G.S. 4072, the military grid is indicated by ticks in the margin and crosses on the face of the map. The majority of the sheets bear no airfield information.

G.S.G.S. 5010, EUROPE (Air), Marine Contoured, 1:250,000 (Code MC) (See lower sample opposite)

This is a "Salmon and Shrimp" series, primarily produced for Coastal Command, covering the west and north coasts of France, Belgium and Holland (and extending into western Germany and Denmark) with a chain of specially sited and overlapping sheets. Only skeleton detail is provided inland and inland relief is not shown.

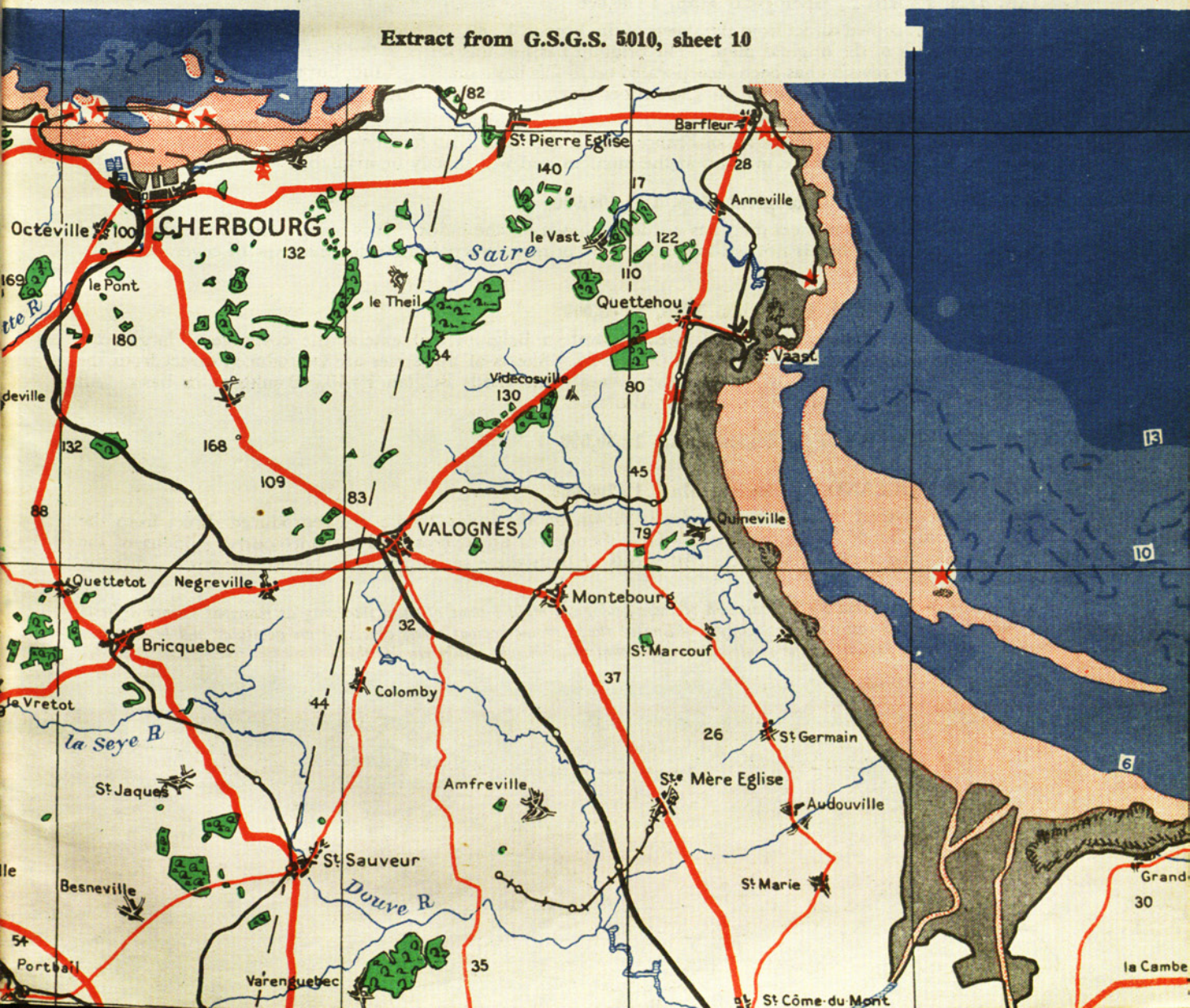
G.S.G.S. 4385 sheet 2 "Marseille" is the only sheet of similar style on the French Mediterranean coast.

Navigational Maps

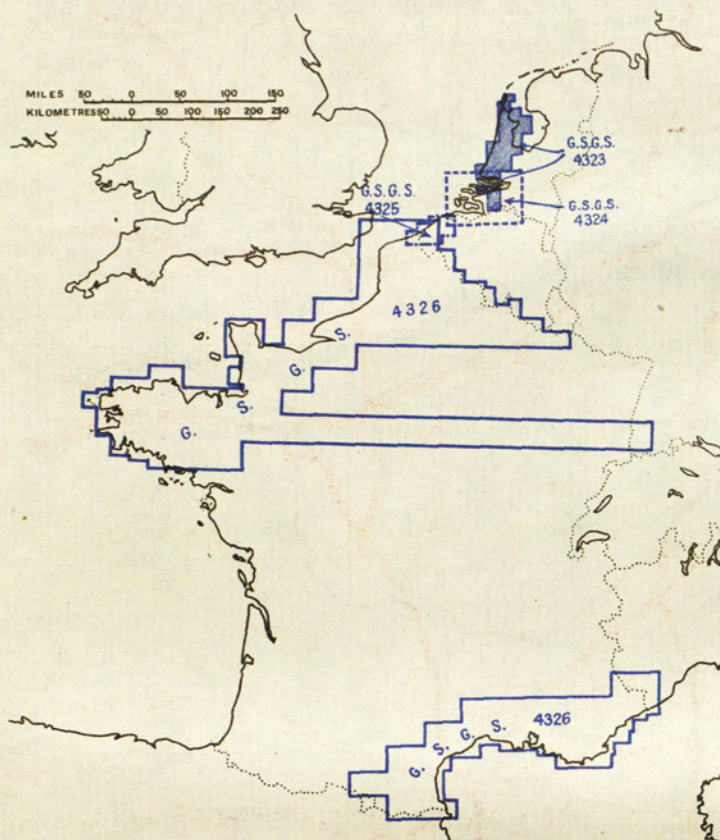
Details of series solely designed for technical air navigation requirements, such as Mercator Plotting Series at 1:2,000,000 (G.S.G.S. 5012) and at 1:1,000,000 (G.S.G.S. 4080), "Lattice" series (G.S.G.S. 4153A & B, and 4430) and "Miniature Lattice" series (G.S.G.S. 4392-3 and 4429) covering the area will be found in the current R.A.F. Map Catalogue.

Target Maps

Many of the principal targets within the area are covered by night bombing target maps and/or by daylight target maps. All target maps, which are published at 1 inch to the mile scale, are checked with air photographs during their preparation.



GEOLOGICAL MAPS

**G.S.G.S. 4326, FRANCE, Geological Map, 1 : 80,000** (*Sample below*)

This series is copied direct from the sheets of the French 1 : 80,000 geological map. Each sheet is printed in the full colouring of the original map. The original basis of this series is the French 1 : 80,000 map which is printed in grey (no revision has been incorporated on to this basic map). A full, but untranslated, explanation of the geological colouring is given on each sheet though, in fact, colour symbols are almost universally standardized on all geological maps.

The block of sheets in the north of France are all available : no further sheets in this area are in hand. Sheets in the south of France are in hand at the moment and will shortly be available.

G.S.G.S. 4452, FRANCE, Geological Map, 1 : 1,000,000

This small scale, four sheet map has not been shown on the index. It is being prepared in the normal full geological colouring but is not yet available. Its primary purpose is to fill the gaps of coverage left by G.S.G.S. 4326.

G.S.G.S. 4325, BELGIUM, Geological Map, 1 : 40,000

Sheets of this series cover a small area of western Belgium and extend the coverage of large scale geological maps along the coast beyond G.S.G.S. 4326. Sheets of this series are reproduced direct from the official Belgian geological map, which uses the normal (unrevised) Belgian 1 : 40,000 map as its basis. All sheets in the area shown on the index are now available.

G.S.G.S. 4323, HOLLAND, Geological Map, 1 : 50,000**G.S.G.S. 4324, HOLLAND, Geological Map, 1 : 200,000**

The area covered by both these series is shown on the index. Both are reproduced direct from the equivalent official Dutch geological sheets which themselves are overprinted on uncoloured editions of the Dutch 1 : 50,000 and 1 : 200,000 series. All sheets of both these series are available for the area shown on the index.

It should be noted that the reproduction of these geological maps—some of them involving as many as twenty different colours—is a lengthy and costly affair. Only very limited stocks of the various sheets concerned are available and hence issues are restricted as far as possible to the small number of technical users who really require them.



OTHER MAPS of Interest in the Area

The following summary of certain other map series, etc., in the area does not attempt to be exhaustive.

G.S.G.S. 2957, EUROPE, 1 : 4,000,000 is the smallest scale G.S.G.S. map of any interest. The front cover to this book is an extract from sheet 19 of this series. Other sheets cover Asia and most of Africa north of the equator.

G.S.G.S. 3975, EUROPE, Outline Map, 1 : 2,500,000 is a series solely designed for the plotting of information, such as intelligence, and sheets, which carry a large overlap, show only coastline, principal rivers and important towns.

G.S.G.S. 4464, EUROPE, 1 : 2,000,000 is in hand at the moment. It is designed principally as a general picture or wall map. Most sheets are taken indirectly from the original drawings of G.S.G.S. 2957. Communications are being revised and names will be presented in a consistently anglicized form (e.g. "Rome" not "Roma").

Bartholomew's 1 : 1,000,000 Contoured Motoring Map of France. This is a clear and useful map with a large amount of detail for its scale. Roads and railways are not completely up to date. Relief is shown by layers in green and brown tints. France is covered by two sheets, both of which are available in limited quantity from normal map supply sources.

G.S.G.S. 2517, N.E. FRANCE and BELGIUM, 1 : 380,160 is an unimportant layered map (in brown, not purple, layers) revised in 1937-38 from a last war map.

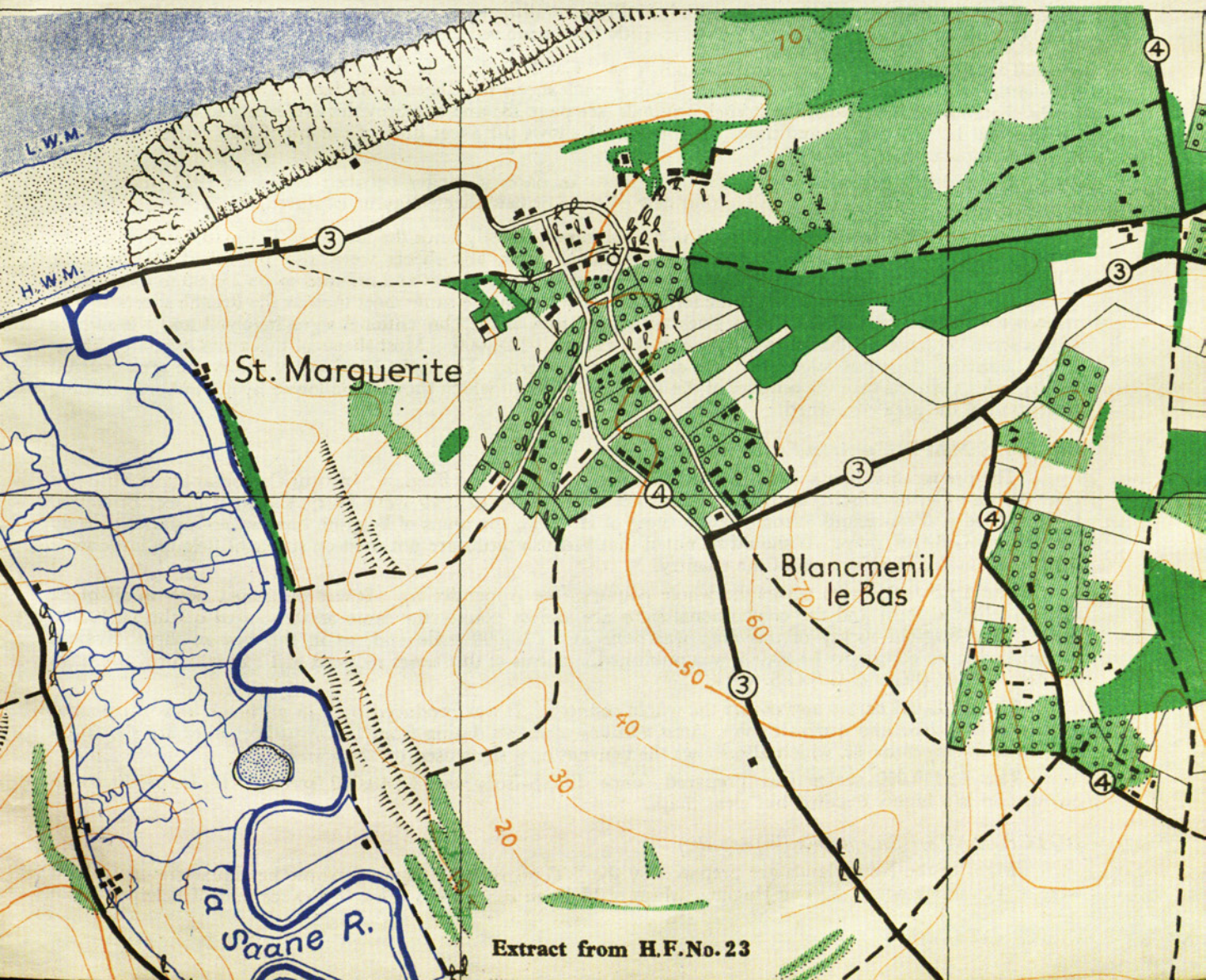
I.S.I.S. Reports. Attention should be drawn to the reports on France and on Belgium and Holland prepared by the Inter-Service Topographical Department. Their report on France, CB.4096J, consists of six volumes, not all yet published (coinciding in areas with the volumes of the G.S.G.S. Throughway Town Plans : see index on page 30) and a large box of maps, plans and diagrams, many of them G.S.G.S. ones. CB.4096K, their report on Holland and Belgium, covers only western Holland and western and central Belgium. These main reports are supplemented by a series of short reports on particular subjects, such as ports or beaches, and are generally illustrated by, or related to, maps or town plans.

Going Maps. It should be noted that "Going" maps of the type prepared for various Mediterranean theatres have NOT been prepared in any form in this area.

Chart Maps. A number of sheets of these maps have been prepared by the Hydrographic Department for various coastal strips. They are produced at 1 : 50,000 scale and consist of the normal chart, extending about ten miles out to sea, with map detail including contours, roads, woods, etc., for an equivalent area inland ; they also carry the map grid. The land parts of these maps are related to the G.S.G.S. 1 : 25,000 and 1 : 50,000 series. Chart maps are printed in colour and on the normal, good quality heavy chart paper.

Chart maps are prepared essentially for naval rather than military use and are intended for naval bombardment in support of landing forces. It should be noted that the Survey service is not normally responsible for the issue of chart maps.

1 : 12,500 Special Sheets (sample below) have been prepared for special requirements as they arise and form no definite series continuously covering any extensive area. All sheets are based on the 1 : 25,000 series, enlarged, with additional detail plotted from air photographs, intelligence reports, etc.



Extract from H.F.No. 23

PART 2. GENERAL NOTES

The following notes on French, Belgian and Dutch maps are primarily included to assist in the recognition of foreign maps that may be captured or otherwise acquired.

FRENCH MAPS (See Appendix (i) opposite)

The production of maps of France is the responsibility of the "Service Géographique de l'Armée" (now called "Institut Géographique National") whose headquarters are—or were, up to 1940—at 136bis, Rue de Grenelle, Paris, VIIe.

In spite of the excellence of some French maps, France remains on the whole a poorly mapped country, the 1 : 80,000 series being the only moderately large scale map covering the whole country. Within the last forty years or so, the French have concentrated on producing 1 : 20,000 and 1 : 50,000 series but so far these two series only cover a comparatively small area of the country along the eastern and north-eastern frontiers and over the chief industrial areas and the 1 : 80,000 series is maintained throughout the country by periodic revision.

It is, generally, extremely difficult to discover the effective date of last revision on French maps. The date of the original map is generally given in the bottom margin and, in addition, a revision date may also occur. The printing dates of sheets are shown inconspicuously at the bottom right corners of sheets, and consist of figures indicating month and year of printing, e.g. "5.37." Important revision may be included, especially on smaller scale maps, on to sheets just before they are printed, without any alteration to the "Revisée" notes. This means that the effective date of the map may be any time between the printing date (which is normally the one accepted) and the "Revisée" date.

Mention must also be made of the road maps and through-way plans prepared by the Michelin Tyre Co. whose tourist branch, located at 97, Boulevard Pereire, Paris, XVIIe, is probably the most important of French private cartographic establishments.

French charts are the responsibility of the Service Hydrographique de la Marine. Some French charts show considerable detail inland, taken, of course, from French maps, and are sometimes of value for mapping purposes.

The following notes cover the principal French series and are supplemented by the diagrams on Appendix I opposite.

The 1 : 80,000 series, the basic French map, was published in one colour only and tends to be illegible, especially in mountainous areas (reproduced, enlarged to 1 : 50,000 as G.S.G.S. 4040B ; see sample on page 19) : this is all the more surprising in view of the quality of most other French series both in France and in the French colonies. The left hand index, opposite, shows the sheet lines of the 1 : 80,000 series in black : sheets are normally published in quarter form, e.g. 157 N.W. Sheets of G.S.G.S. 4040B, being direct copies of the French originals, provide an explanation of the conventional signs used.

The original survey of this series was done at 1 : 40,000 scale : hence the enlargement of sheets to 1 : 50,000 scale should not of itself introduce inaccuracies. It is of interest to note that the hachuring (fine black lines showing relief) was governed by the surveyor's contour sketches and gives an accurate picture of the ground.

Sheets of this series were originally produced during the last century : periodic revision has been carried out, from area to area, to most sheets in the period 1920 to 1935.

The 1 : 50,000 (black) series was a direct enlargement of sheets of the 1 : 80,000 series : sheets have been gridded by the French and form the standard French military map outside areas covered by the coloured 1 : 50,000 series. Sheets of this series have recently been acquired carrying printing dates up to 1943.

The 1 : 50,000 (coloured) series, known as "Carte de France, Type 1922" is an accurate, clear and excellent map. In the area of G.S.G.S. 4471 the French sheets have been reproduced direct and this series gives a representation of the style of the French originals (see page 18) and also provides a reference to the conventional signs involved. The right hand index of Appendix 1 shows the sheet lines of the 1 : 50,000 series, which are related to those of the 1 : 20,000.

The series is based on the 1 : 20,000 series. In dates it ranges between 1922 and 1941, most sheets being of the 1935 order. It is possible that new editions or new sheets may be captured.

The 1 : 20,000 series was the result of French survey, mostly since the last war. The actual survey and the drafting was at 1 : 10,000 scale, except in mountainous areas, and sheets were also published at this scale. The 1 : 20,000 series, where it is available, has been reproduced direct and reduced to 1 : 25,000 to form sheets of G.S.G.S. 4411 and G.S.G.S. 4041, the former series being on the same sheet lines as the French sheets. The reference on sheets of G.S.G.S. 4411 gives an explanation of the conventional signs involved and the sample of this series on page 24 illustrates the style of the French 1 : 20,000. Most sheets of this series are dated about 1930 : those in the south of France are even more modern. The right hand index shows the area covered by the series. Sheets take the number of the 1 : 50,000 sheet in which they fall, followed by a number indicating the eighth of the area concerned.

BELGIAN MAPS (See Appendix (ii) opposite.)

The preparation of maps of Belgium is the responsibility of the Belgian "Institut Cartographique Militaire (Het Militair Cartografisch Instituut)" whose headquarters up to 1940 were at 2, Allé du Cloître, Bruxelles. Unlike those of France and to some extent those of Holland, the maps of Belgium have in no instance directly formed any G.S.G.S. map. It should be noted that Flemish terms are not used on sheets of Belgian large scale maps even in the Flemish area of the country.

The 1 : 20,000 series covers the whole country (see Appendix ii). It was published both in all black and in coloured form and the conventional signs are almost exactly the same as those used on the 1 : 40,000 series. The original survey of this map was done at 1 : 10,000 scale and, as in the case of the equivalent French series, an edition at 1 : 10,000 was published. Sheets of this series reduced to 1 : 25,000 form the basis of most Belgian sheets of G.S.G.S. 4041.

The 1 : 40,000 series also covers the whole country. It was produced both in all black and in coloured form and is a clear and accurate map, latest editions of sheets dating from 1933. Sheet lines are shown on the index at Appendix II, which also shows the conventional signs used on the series.

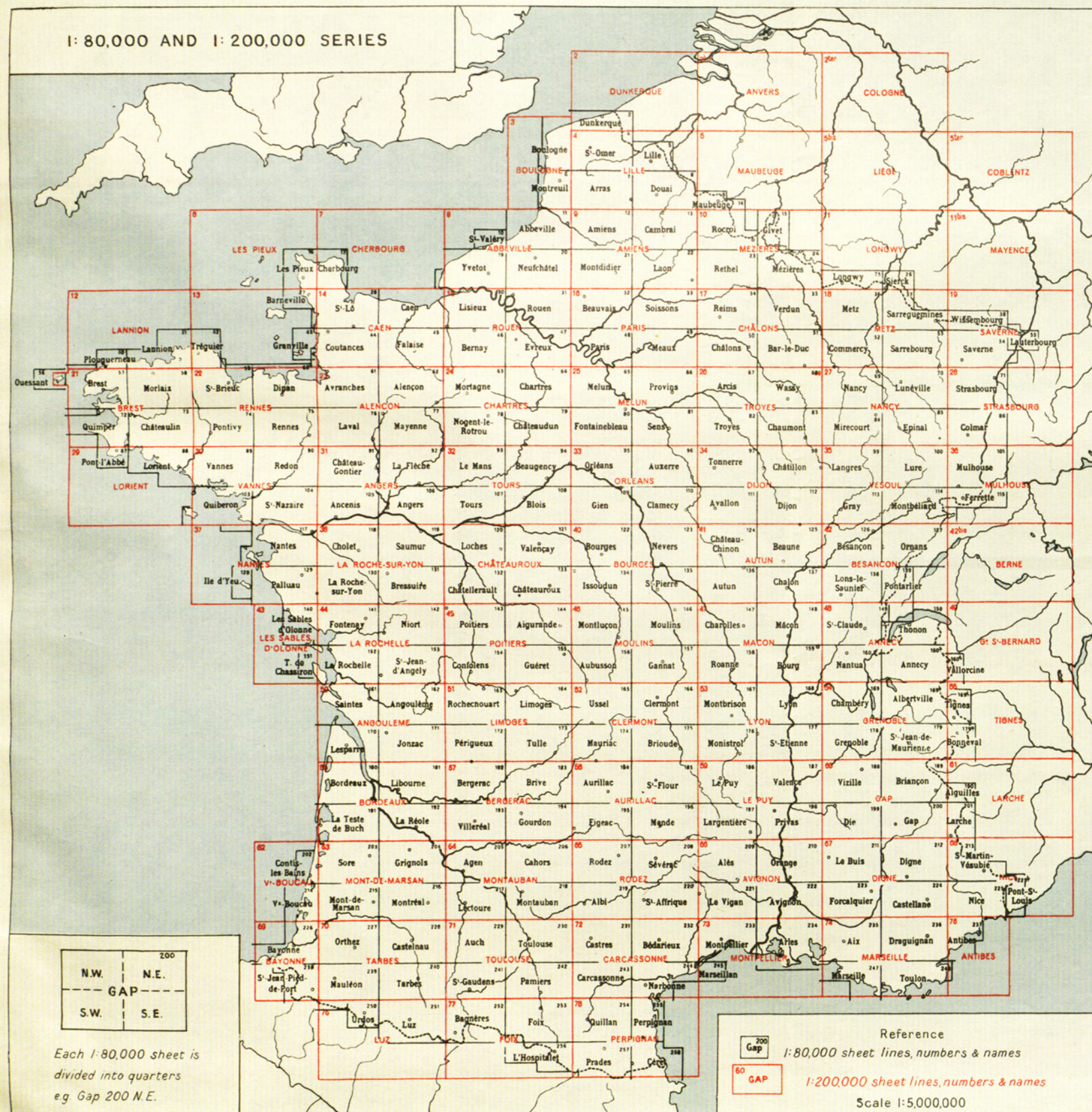
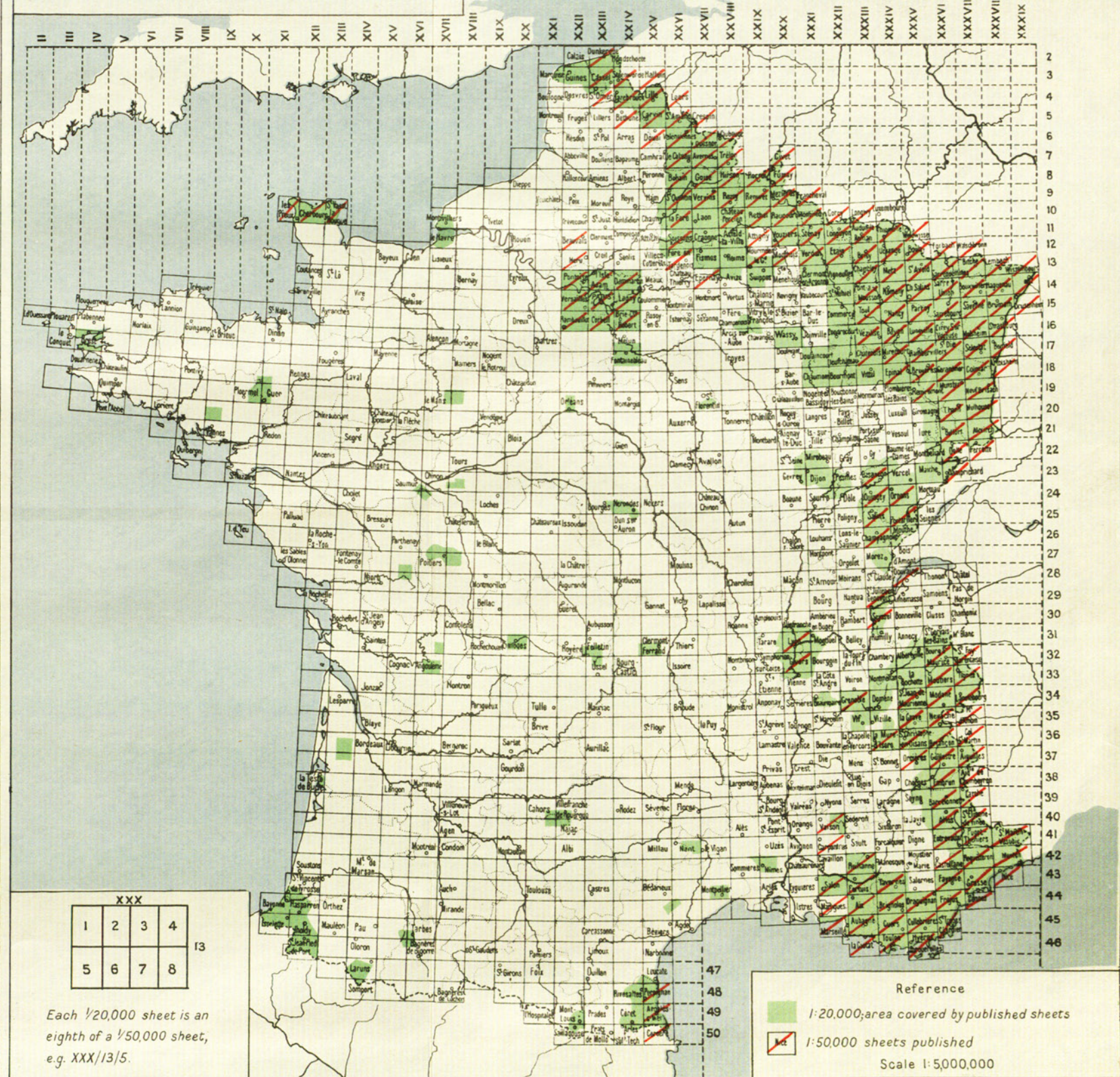
The 1 : 100,000 series was prepared (since 1931) from the 1 : 40,000 series. It is produced in colour and is a highly detailed but clear map.

DUTCH MAPS (See appendix (iii) opposite)

Maps of the Netherlands are prepared by the "Topografische Dienst" whose headquarters up to 1940 were at Prinsessegracht, 15, The Hague. Maps of Holland differ from those of France and of Belgium in the

FRENCH MAPS

1:80,000 AND 1:200,000 SERIES

"PLANS DIRECTEURS" 1:20,000 AND
"NOUVELLE CARTE DE FRANCE" 1:50,000

BELGIAN MAPS

CONVENTIONAL SIGNS

Contour interval is 5 metres, and the datum is the mean low water mark of Spring tides at Ostende. Spot heights in brackets are those of the general survey of the country.

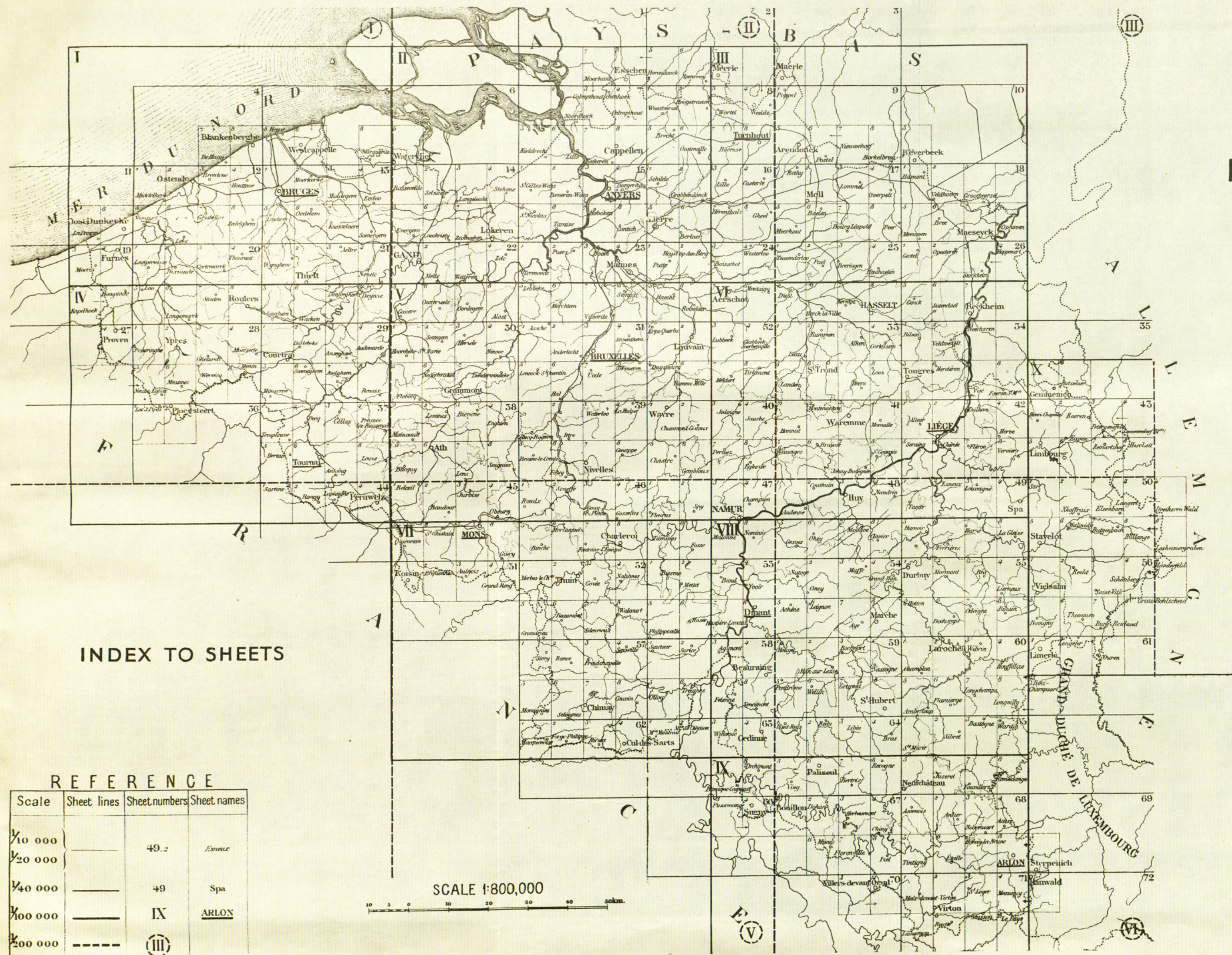
INDEX TO SHEETS

REFERENCE

Scale	Sheet lines	Sheet numbers	Sheet names
1/10 000		49.2	Enneux
1/20 000		49	Spa
1/40 000		IX	ARLON
1/100 000			
1/200 000		(III)	

SCALE 1:800,000

0 10 20 30 40 50 km.





vast amount of additional detail which they show, both of normal geographical features and of information dealing with land utilisation.

The 1:25,000 (old) series covers the whole country and has a range of dates from 1904 to 1934. It is a detailed, clear and, where modern, accurate map. In 1934 the Dutch started preparing a new 1:25,000 series, extremely similar in style to the old series but on rather different sheet lines (see Appendix (iii)), and gridded with the Dutch grid. An explanation of the conventional signs of these 1:25,000 series, which, in effect, are also those for other Dutch series is shown at Appendix (iii).

The 1:50,000 series, both old and new was prepared from the 1:25,000 series, to which it is very similar in style. The dates of both old and new series correspond with those of the old and new 1:25,000 series and, again as in the case of the new 1:25,000 series, only a few new 1:50,000 sheets have been prepared.

The 1:200,000 series is the principal Dutch series immediately smaller in scale than the 1:50,000 series. Again it corresponds closely in style to the other maps and it is on corresponding sheet lines. Range of dates of sheets is from 1927 to 1938.

Further French, Belgian and Dutch original maps held in G.S.G.S. Map Library are shown below.

It is to be emphasised that it is essential to the accuracy of British maps that all captured foreign maps be passed to the appropriate Survey Service unit immediately. Such maps are likely to be located at local Military Headquarters, at airfields and, possibly, at local Municipal offices, such as the "Mairie" in small French towns, or the "Hôtel de Ville" in larger towns.

Original foreign maps of the area held in G.S.G.S. Map Library.

The following list, extracted from the Map Library catalogues, includes for reasons of space only the more important items of the foreign maps available in the map library. Most of the maps comprised in the lists have either been reproduced direct as G.S.G.S. series or have been used in the preparation or revision of such maps.

FRANCE

<i>Title</i>	<i>Scale</i>	<i>Sheets</i>	<i>Date</i>	<i>Description</i>	<i>Publisher</i>
Carte de France	1:10,000	In progress	(few 1907) 1938-	Contours. Graticules in Grades. Prime Meridian—Paris. Railways—3 cats.	Service Géogr. de l'Armée.
Carte de France (Black edition—few coloured)	1:20,000	In progress	1894-	Contours. Gridded. Railways—3 cats. Roads—3 cats.	Service Géographique de l'Armée.
Carte Industrielle de la Région Parisienne	1:20,000	4	1933	.....	Société de Documentation Industrielle.
Carte de France	1:50,000	In progress	1908-1940	Contours. Gridded. Prime meridian—Paris. Railways—3 cats. Roads—3 cats.	Service Géographique de l'Armée.
Carte de France. Black edition (Enlarged from 1:80,000)	1:50,000	273 (full sheets)	1912-1941	Contours. Gridded, Graticules as grades. Hachured. Prime meridian—Paris. Railways—2 cats. Roads—3 cats.	Service Géographique de l'Armée.
Sorties de Paris	1:50,000	1	1938	Graticules in grades. Railways—2 cats. Roads—4 cats.	Michelin.
Carte de France (in black)	1:80,000	273 (full sheets)	1904-1939	Hachured. Prime meridian—Paris. Railways—2 cats. Roads—4 cats. Spot heights	Service Géographique de l'Armée.
Carte de France	1:100,000	611	1883-1935	Prime meridian—Paris. Railways—3 cats. Roads—5 cats. Spot heights	Ministre de l'Intérieur.
Carte industrielle	1:200,000	25	1927-1934	Industrial areas in France. Large scale plans of important towns.	Société de documentation industrielle.
Carte de France et des Frontières	1:200,000	85	1931-1939	Contours. Graticules in grades. Railways—2 cats. Roads—4 cats.	Service Géographique de l'Armée.
Carte Michelin de France	1:200,000	40	1937-1939	Graticules in grades. Railways—2 cats. Roads—4 cats.	Michelin.
Carte de France et des Pays Limitrophes : Type Aviation	1:500,000	22	1930-1939	Hill-Shading. Prime meridian—Paris. Railways—2 cats. Roads—2 cats. Spot heights	Service Géographique de l'Armée.
Carte de France et des Pays Limitrophes	1:500,000	22	1932-1939	Hill-Shading (some sheets contoured). Prime meridian—Paris. Railways—2 cats. Roads—2 cats. Spot heights	Service Géographique de l'Armée.

FRANCE (*contd.*)

Production et Transport de l'Energie Electrique	1 : 500,000	12	1933	Electrical Installations	Service Géographique de l'Armée.
Carte des Voies Ferrées, Voies Navigables et Canaux	1 : 800,000	2 + 2 lists of Stations & distances	1928	Administrative Districts. Roads. Railways. Squared	E. Girard. Paris.
France : administrative et routière	1 : 800,000	1 + Record of Kilo. distances between principal towns	1932	Administrative Districts. Railways—3 cats. Roads—2 cats. Towns—Relative importance	Institut Géographique. Universal—Paris.
Carte des Chemins de Fer Français	1 : 800,000	4	1941	Enlargement of areas around certain main towns	Service Géographique de l'Armée.
Carte des Canaux de France et Belgique	1 : 1,000,000	1	1935	.....	Girard & Barrere, Paris.
Carte des Routes Nationales de France	1 : 1,000,000	2	1936	Prime Meridian—Paris. Roads—2 cats. Railways—2 cats. Spot heights	Service Géographique de l'Armée.
Carte Michelin : Les Grandes Routes	1 : 1,000,000	2	1939	Administrative Districts. Prime Meridian—Paris. Railways—4 cats. Roads—3 cats. Towns—relative importance	Service Géographique de l'Armée.
Routes Rapides : Michelin	1 : 1,000,000	2	1939	Roads—Types, surfaces and dependability	Service de Tourisme Michelin.
Carte de la France Métallurgique	1 : 1,250,000	1	n.d.	Larger scale insets of more important areas	G. Peltier.
Carte Administrative de la France	1 : 1,400,000	1	1938	.....	Service Géographique de l'Armée.

"n.d." means no date given.

BELGIUM

<i>Title</i>	<i>Scale</i>	<i>Sheets</i>	<i>Date</i>	<i>Description</i>	<i>Publisher</i>
Belgique (Coloured edition)	1 : 20,000	446	1905-1938	Contours. Prime meridian—Brussels. Railways—6 cats. Roads—6 cats. Towns—relative importance	Institut Cartographique Militaire—Bruxelles.
Carte de Belgique	1 : 40,000	72	1933-1939	Administrative Districts. Contours. Gridded. Prime meridian—Brussels. Railways—4 cats. Roads—3 cats. Towns—relative importance.	Institut Cartographique Militaire—Bruxelles.
Carte de Belgique (new sheet lines)	1 : 100,000	10	1931-1938	Administrative boundaries. Contours. Railways—3 cats. Roads—2 cats.	Institut Cartographique Militaire—Brussels.
Carte Géologique de la Belgique	1 : 160,000	12	1920	.....	Institut Cartographique Militaire.
Le Canal Albert, et les voies navigables	1 : 160,000	1	1936	Canals. Railways. Roads—state and provincial	.....
Carte Michelin de la Belgique	1 : 200,000	4	[1930]-1940	Administrative districts. Railways—2 cats. Roads—5 cats. Towns—relative importance	Michelin.
Carte Routière de Belgique	1 : 200,000	9	[1938]	Railways—3 cats. Roads—6 cats. Towns—relative importance	Touring Club de Belgique.
Carte de la Belgique	1 : 320,000	1	1938	Administrative districts	Institut Cartographique Militaire—Bruxelles.
Belgique : Carte des chemins de fer, routes et voies navigables	1 : 320,000	1	1937	Administrative Districts. Railways—3 cats. Towns—relative importance	Institut Cartographique Militaire—Bruxelles.

BELGIUM (*contd.*)

Carte officielle des chemins de fer Belges	1 : 400,000	1	1935	Administrative districts. Railways—all classifications	Société Nationale des Chemins de Fer Belges.
Carte des chemins de fer vicinaux de la Belgique	1 : 480,000	1	31 Dec., 1936	Railways—all classifications	Société Nationale des Chemins de Fer Vicinaux.
Belgique. Carte Oro-Hydrographique	1 : 500,000	1 + Explanatory Book	1937	Canals. Contours. Layered	Ghellinck Lefevre and Michotte.
Carte de navigation aérienne	1 : 500,000	2	1934	Aerodromes. Railways—2 cats. Roads. Spot heights	Belgian Shell Company.
Carte des voies intérieures navigables de la Belgique, les Pays-Bas, l'Allemagne (Ouest) N.E. France. 11e Edition	1 : 1,000,000	1	[1934]	.....	Patria N.V. Antwerp.

Dates in brackets are uncertain.

HOLLAND

<i>Title</i>	<i>Scale</i>	<i>Sheets</i>	<i>Date</i>	<i>Description</i>	<i>Publisher</i>
Chromo-topogr. Kaart van Nederland	1 : 25,000	776	1904-1934	Contours. Railways—3 cats. Roads—3 cats. Squared. Towns—relative importance	Topografische Inrichting, The Hague.
Chromo-topogr. Kaart van het Koninkrijk der Nederlanden (new series)	1 : 25,000	in progress	1935-	Contours. Roads—3 cats. Railways—2 cats. Gridded	Topografische Dienst, The Hague.
Waterstaats Kaart van Nederland	1 : 50,000	183	1871-1928	Canals. Irrigation. Contours. Dykes. Polder areas in colour	Topografische Dienst, The Hague.
Topogr. en Militaire Kaart (coloured)	1 : 50,000	62 (full sheets)	1904-	Administrative Districts. Contours. Roads—3 cats. Spot heights. Gridded. Railways—2 cats. Prime meridian—Amsterdam. Towns—relative importance according to number of inhabitants	Topografische Dienst, The Hague.
Topogr. en Militaire Kaart (new series, coloured edition)	1 : 50,000	in progress	1935-	Contoured. Railways—2 cats. Gridded. Roads—2 cats. Prime meridian—Greenwich	Topografische Dienst, The Hague.
Overzichtkaart der Binnenscheepvaartwegen (Behoort bij den Wegwijzer van de Binnenscheepvaart, Deel I, II & III.)	1 : 100,000	12	1930-1934	Inland Waterways. Administrative districts. Roads—3 cats. Railways—2 cats.	Topografische Inrichting, The Hague.
NORTH HOLLAND Wieringermeer Polder	1 : 100,000	1	1934	Roads	A.N.W.B. (Algemeen Nederlandsche Wielrijders Bond)
Topografische Kaart van het Koninkrijk der Nederlanden	1 : 200,000	23	1927-1938	Coloured. Contoured. Roads—4 cats. Prime meridian—Amsterdam. Railways—2 cats. Towns—relative importance according to number of inhabitants	Topografische Dienst, The Hague.
Autokaart van Nederland	1 : 200,000	3 with list of place names	1937-1939	Railways—3 cats. Spot heights. Roads—6 cats. Squared	A.N.W.B.
Carte Routière de la Hollande	1 : 200,000	2	1940	Normal Michelin style	Service Géogr. de l'Armée.
Spoor-en Tramwegkaart van het Koninkrijk der Nederlanden	1 : 400,000	1	1931	Railways—5 cats.	Topografisch Inrichting.

HOLLAND (*contd.*)

Schipperskaart van Nederland, met de Spoor-, Tram- en Scheepvaartwegen	1 : 400,000	I	1931	Towns—relative importance	E. de Geest.
Gemeentenkaart van Nederland	1 : 400,000	I	1937	Administrative districts. Prime meridian—Amsterdam	Topografische Dienst.
Luchtvaartkaart van Nederland	1 : 400,000	I	1939	Prime meridian—Amsterdam. Railways—3 cats. Roads—2 cats. Spot heights	Kon. Nederl. Touristenbond A.N.W.B.
Kaart der Nederlandsche Spoorwegen en Tramwegen	1 : 600,000	I	1938	Railways—2 cats.	Teulings' Grafische Kunstinrichting N.V. Amsterdam.
Series of maps of the waterways of Holland	various	II	1939	Navigable waterway—5 cats. Key to width, length and depth of locks	A.N.W.B.

AIR PHOTO. COVERAGE

Frequent references to the revision of maps and town plans from air photographs make it necessary to show, diagrammatically, the approximate extent of air photo. coverage in the area.

Appendices, opposite, illustrate, by separate diagrams for France, Belgium, Luxembourg and Holland, the extent of air photo. coverage available in this country as at 30 June, 1943. These diagrams have been compiled and printed by the Central Interpretation Unit of the R.A.F., who house and control a photographic library. The red areas on the diagrams illustrate the cover received up to December, 1942 and the green areas show the additional cover received in the subsequent six months. The new cover available within the last six months (not shown on these diagrams) would comprise, roughly speaking, an extension inland of about the same size as the green areas. Recently, as a result of the capture of Sardinia and Corsica, air photography of the south of France has become a simpler matter.

It should be emphasised that only small areas of the total coverage shown are covered by survey quality (*i.e.*, large scale, untitled) air photographs.

ROAD CLASSIFICATIONS

A definite requirement on 1 : 250,000 scale maps and to a rather lesser extent on larger scale maps, is the classification of roads into general width and surface categories. Details of the categories into which roads have been classed, of the principal source information used for the classification and of the signs by which the different categories are shown are given in the tables on pages 47, 48 and 49.

It will be noted that road classifications are based on national areas (Belgium and France have actually been treated together in the table below since categories and material are largely the same).

It should be emphasised that most of the systems of width and surface classification which have been applied in the area are generalisations only and are based on localised information or experience which, when extended, is bound to include particular errors. The French system, for example, is initially based on certain sheets of G.S.G.S. 4040 in the Lille area on which roads were classified on the ground by the B.E.F. in 1939–40 (*vide* page 19) : these classifications were then compared against sheets of the Michelin 1 : 200,000 series and width values were allotted for the different Michelin symbols.

The systems for France and for Belgium were the first two to be formulated, and it now appears that the category described as “3–6 metres wide” is too general a designation to be of much value for M.T. requirements. It is also believed that a number of Routes Nationales and Chemins de Grande Communication in France, which are probably in the 6 metre class, have been down graded to 3–6 metres.

On the whole, it is thought that the various systems tend to give rather conservative estimates of road widths. This is probably to the good if the map user is trying to calculate road widths for the movement of his own transport but conversely, requires watching if he is attempting to calculate for the movement of enemy transport.

It is obvious that the general classification given on the various G.S.G.S. maps should wherever possible be checked by reconnaissance and should never be regarded as more than a general guide to road widths or surfaces.

Most of the road classification systems have been formulated by M.I.10(c), the War Office section concerned. It will of course be appreciated that, where information, *e.g.*, in the form of an intelligence report, about a particular road has become available, it has been incorporated into map sheets affected, in so far as the state of their production permits.

A final point of importance is that where reliable information concerning new roads is available only in non-graphic form or only at a scale smaller than that of the map concerned, such roads are shown diagrammatically (*e.g.*, by straight lines) with a note such as “Alignment unknown” alongside them.

MAP OF FRANCE

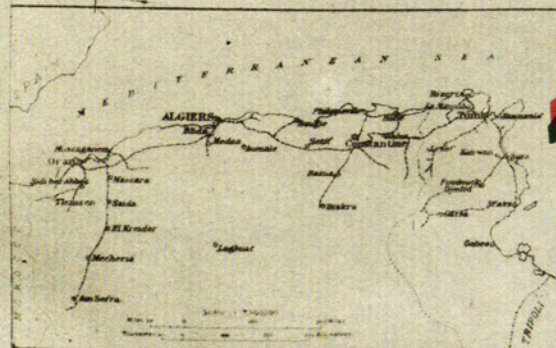
0 50 100 150 MILES
Approx.

RECORDED PHOTOGRAPHIC COVER
UP TO 31ST DEC. 1942

C.I.U. SECRET Neg No 16348 R

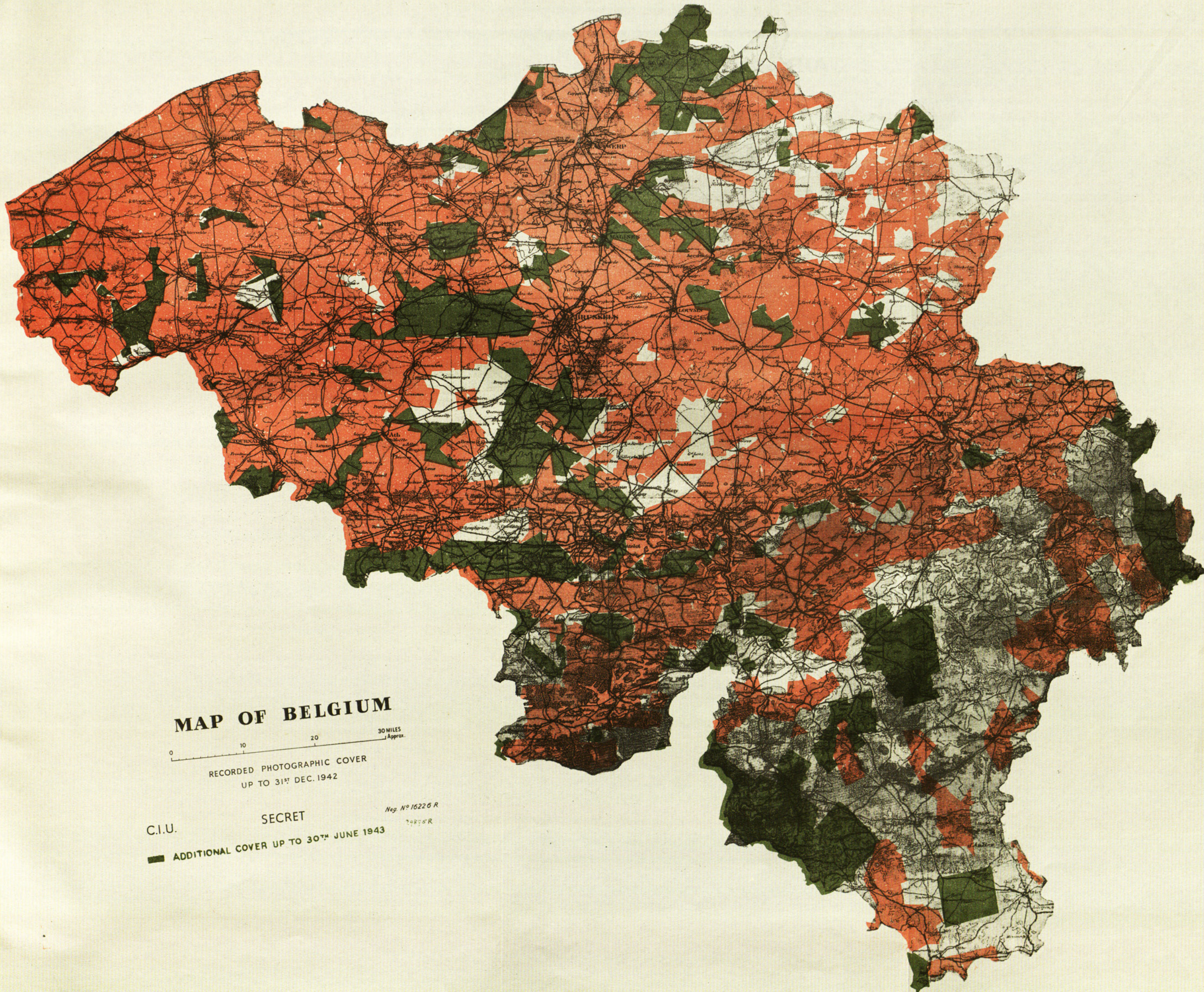
■ ADDITIONAL COVER UP TO 30TH JUNE 1943

ALGERIA AND TUNISIA



Authenticité
Carte Des Chemins De Fer Français
1/800000 Service Géographique
de l'Armée, Paris, 1940

Reference
Railways, 4 Track line
" 2
" 1
Light or narrow gauge



MAP OF BELGIUM

0 10 20 30 MILES
Approx.

RECORDED PHOTOGRAPHIC COVER
UP TO 31ST DEC. 1942

C.I.U.

SECRET

Neg. No 16226 R

29875 R

■ ADDITIONAL COVER UP TO 30TH JUNE 1943

MAP OF LUXEMBOURG

0 5 10 15 20 MILES
Approx.

RECORDED PHOTOGRAPHIC COVER
UP TO 31ST DEC. 1942

C.I.U.

SECRET

Neg. No 16395 R

■ ADDITIONAL COVER UP TO 30TH JUNE 1943

Neg. No 29166 R





MAP OF HOLLAND

0 5 10 15 20 MILES
Approx

RECORDED PHOTOGRAPHIC COVER
UP TO 31ST DEC. 1942

■ ADDITIONAL COVER UP TO 30TH JUNE 1943


























































C.I.U.

SECRET

Neg. No. 16472 R.

Neg. No. 19728 R.

CLASSIFICATION OF ROADS IN FRANCE AND BELGIUM

ROAD CATEGORIES		SOURCE	CORRESPONDING SYMBOLS ON G.S.G.S. SERIES							
(Road classification is not based on reconnaissance: its reliability is uncertain)		(Principal source of information, Michelin Carte au 200,000 <i>ème</i>)	G.S.G.S. 2738 France 1 : 250,000	G.S.G.S. 4042 North-West Europe 1 : 250,000	G.S.G.S. 4346 Germany 1 : 250,000	G.S.G.S. 4230 Italy 1 : 250,000	G.S.G.S. 4249 France 1 : 100,000 also G.S.G.S. 4250 France 1 : 50,000 and G.S.G.S. 4416 Germany 1 : 100,000	G.S.G.S. 4336 Belgium and N.E. France 1 : 100,000	G.S.G.S. 4040 Belgium and N.E. France 1 : 50,000	
MAIN ROADS (In France, <i>Routes Nationales</i> , and <i>Chemins de Grande Communication</i>) Over 8 metres wide, metalled or pavé Over 6 metres wide, metalled or pavé 3-6 metres wide, metalled or pavé		This category has been taken from intelligence reports, and is shown in Belgium only. There is no corresponding symbol on Michelin. All continuous red filled roads on Michelin 1 : 200,000 N.122 N.122 (Wide) (Medium) (Narrow) All remaining roads on Michelin 1 : 200,000 with "N" or "G.C." (except narrow unfilled roads with "G.C." and yellow peck filled roads with G.C.) N. or G.C. N. or G.C. N. or G.C. (Wide); N. or G.C. (Medium); N. or G.C. (Wide); N. or G.C. (Wide); N. or G.C. (Narrow); N. or G.C. (Wide); N. (Narrow); NOT G.C. (Narrow); G.C. (Narrow);	  	  	  	  	  	  	  	
SECONDARY ROADS		All remaining double line roads (not on Michelin 1 : 200,000 with "G.C.", "D." or "I.C." D. or I.C. (any width); G.C. D. or I.C. (any width); D. or I.C. (any width); (Narrow)	  	  	 					
OTHER ROADS and Tracks, Minor Roads		All remaining roads, tracks, etc., on Michelin 1 : 200,000 V.O. (no letter) (any letter) (Narrow);	  	  	 					
Footpaths		Paths, etc., on larger scale material (e.g., French 1 : 80,000's) and air photographs.	  	  	 					

CLASSIFICATION OF ROADS IN HOLLAND

ROAD CATEGORIES	SOURCE	CORRESPONDING SYMBOLS ON G.S.G.S. SERIES				
		G.S.G.S. 4042 North-West Europe 1 : 250,000	G.S.G.S. 4346 Germany 1 : 250,000	G.S.G.S. 2541 Holland 1 : 100,000	G.S.G.S. 4336 Belgium and N.E. France 1 : 100,000	G.S.G.S. 4416 Germany 1 : 100,000
(Road classification is not based on reconnaissance : its reliability is uncertain)	(Principal source of information "A.N.W.B.". Autokaart van van Nederland, 1 : 200,000 ")					
National Highways, <i>Rijkswegen</i> , with 2 carriage ways, each over 6 metres wide, metalled	This category has been taken mainly from intelligence reports and from Michelin 1 : 200,000.					
National Highways, <i>Rijkswegen</i> , with 1 carriageway and Main Roads, generally 6 metres wide or over, metalled	All "Main roads" on A.N.W.B. map not included above.					
Other Main Roads, generally 5 metres wide or over, metalled	All "Other important roads" on A.N.W.B. map not included above. All roads shown or higher class on German 1 : 300,000 series, which are shown on A.N.W.B. map as "Roads of regional importance" and which are shown on Michelin 1 : 200,000 with a filling or as wide unfilled.					
Secondary Roads, generally about 4 metres wide, metalled	All "Roads of regional importance" on A.N.W.B. map not included above. All filled roads on Michelin 1 : 200,000 not included above. All wide unfilled roads on Michelin 1 : 200,000 not included above.					
Other Roads, usually metalled	All "Roads of local importance" on A.N.W.B. map not included above. All medium or narrow unfilled roads (not or on Michelin 1 : 200,000, not included above.					
Cart Tracks	All roads shown on Michelin 1 : 200,000 as or where not included above.					

CLASSIFICATION OF ROADS IN GERMANY

<i>Road Categories.</i>	Principal Source, Reichs-Auto-Karte 1 : 300,000. Corresponding Symbols below.	Corresponding Symbols on G.S.G.S. 4042 & G.S.G.S. 4346 North-West Europe 1 : 250,000 Germany 1 : 250,000
Road classification is not based on reconnaissance : its reliability is uncertain.		
Motor Highways (independent of road system), <i>Reichsautobahnen</i> 2 carriage ways each metalled and 7.5 metres wide. Connecting points with road system where known Under construction.		
Main Roads, <i>Reichstrassen</i> , with route numbers. Metalled and mostly 6 metres wide.		
Other Main Roads (Mostly <i>Landstrassen</i> 1 <i>Ordnung</i>) metalled and 5.5 metres average useful width.		
Secondary Roads. Metalled and 4 metres average useful width.		
Other Roads and Cart Tracks. Not always motorable and often unmetalled.		
Paths.		

CLASSIFICATION OF ROADS IN SWITZERLAND

<i>Road Categories.</i>	Principal source of information Swiss " Official Road Map 1 : 450,000. Corresponding Symbols below.	Corresponding Symbols on G.S.G.S. 2738. France 1 : 250,000.
Road classification is not based on reconnaissance : its reliability is uncertain.		
Main Roads, generally 6 metres wide or over, metalled.		
Other Main Roads, generally 5 to 6 metres wide, metalled.		
Secondary Roads, generally about 4 metres wide, metalled.		
Other Roads and Tracks.	No corresponding class on Official Road Map.	

CLASSIFICATION OF ROADS IN SPAIN

<i>Road Categories.</i>	Principal Sources Michelin 1 : 1 M. and Michelin 1 : 400,000 (of 1942).	Corresponding Symbols on G.S.G.S. 2738 France 1 : 250,000.
Road classification is not based on reconnaissance : its reliability is uncertain.		
Main (National) Roads, 6 metres wide or over, metalled.		
Other Main (Regional) Roads, 4 to 5 metres wide, or over, metalled.		
Secondary Roads, about 3 to 4 metres wide, metalled.		
Other Roads, generally metalled and motorable.		
Tracks and Paths.		

CLASSIFICATION OF ROADS IN ITALY

<i>Road Categories.</i>	Principal Source Carta Automobilistica del Touring Club Italiano 1 : 200,000. Corresponding Symbols below.	Corresponding Symbols on G.S.G.S. 4230 Italy 1 : 250,000.
Road classification is not based on reconnaissance : its reliability is uncertain. All classes of road tend to narrow in villages.		
National Highways, <i>Autostrade</i> 8 metres wide, metalled.		
Main Roads, <i>Strade Statali</i> (with numbers) 6 metres wide or over, metalled.		
Other Main Roads, <i>Strade di grande comunicazione</i> , 5 metres wide or over, metalled.		
Secondary Roads, 3-5 metres wide, generally metalled.		
Other Roads and Cart Tracks, generally unmetalled.		
Mule Tracks.		
Paths.		

GRID ZONES AND BOUNDARIES

Technical descriptions of the different British military grids on the various maps of the area are outside the scope of these notes. The diagram below, however, does show the areas covered by the various grid zones involved, and in doing so serves as a warning for areas where more than one grid may be involved on any one map. The different grids have in each case been shown on the diagram in their appropriate colours.

It should be noted that all the G.S.G.S. maps of this area at scales of 1 : 500,000 and larger—including many Town Plans—carry grids. In certain areas too, the Hydrographic Department has produced charts carrying the military grid and which are thus in sympathy with the grids on maps.



FOREIGN GRIDS

The following notes on grids liable to be found on foreign maps are included to assist in interpreting grids and grid references on captured maps.

French Grids

Grids on British maps of France are based on the French grid systems but the latter must be used with caution since there are certain important differences, detailed below.

1. BOUNDARIES.—While information is incomplete, it appears that the French do not define the boundaries between their grids as rigidly as we do. The limits are certainly different, as the following examples will show :—

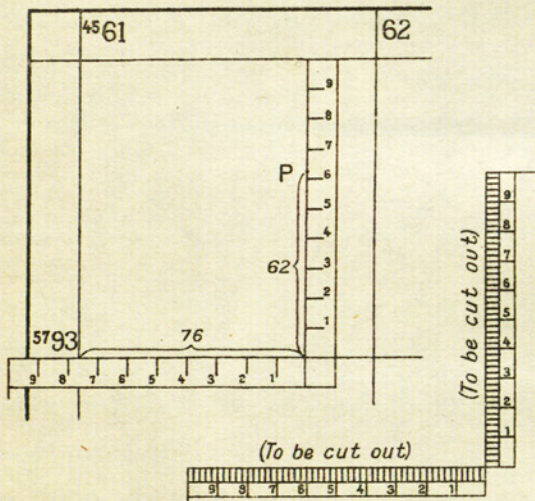
(a) Lambert 1 grid appears on some maps falling in the British Nord de Guerre area. On such examples the Nord de Guerre grid may be indicated by ticks.

(b) The Nord de Guerre grid appears on many sheets on which Lambert 2 is used on British maps. Near the eastern frontier it may be found as much as 40' south of its limit on British maps.

(c) Lambert 2 is found on maps in the Brest area, considerably north of its limit on British maps.

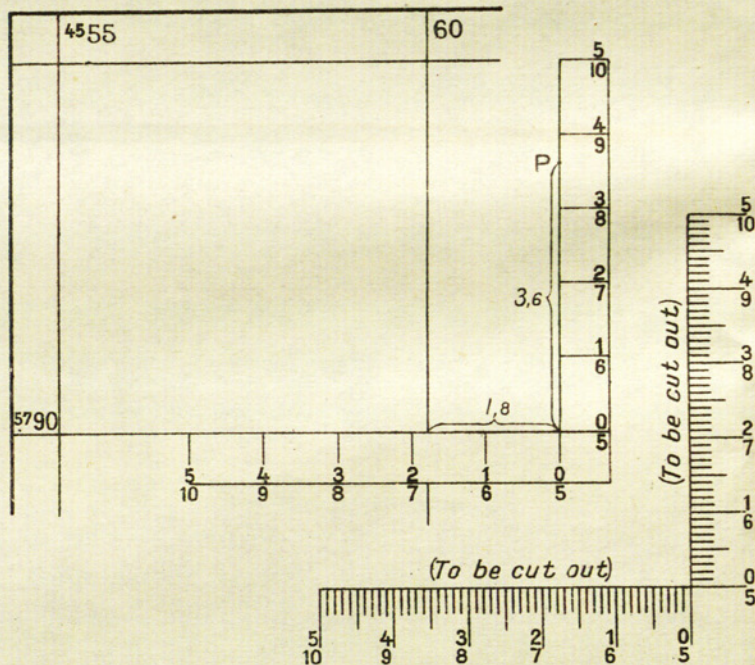
THE GERMAN "ROMERS" and examples of referencing.

Point P is: 61,76 right, 93,62 high.



"Romer" 1:25,000

Point P is: $\begin{cases} 61,8 \text{ right} \\ 93,6 \text{ high} \end{cases}$



"Romer" 1:100,000

2. **LETTERS.**—The French use no letters, and each grid line is numbered with its full value in kilometres. Full references are seldom given but, when they are, they are given in metres in the form—

$$\begin{aligned} X \text{ (Easting)} &= 91225 \\ Y \text{ (Northing)} &= 228531 \end{aligned}$$

Until 1940 short references generally omitted tens and hundreds of kilometres and were given to the nearest 100 metres, the Eastings being separated by a full stop from the Northings. In the example given above this would give the reference 12.85. Such references repeat at 10 km. intervals, so they are only appropriate to static warfare. Since 1940 the French have sometimes inserted the figures denoting tens or hundreds of kilometres, in which case the example above would be 912.285 or 0912.2285. The zero which precedes the 9 in the last example does not actually appear on the face of a French map but it is added in the reference in order that the number of figures in Northing and Easting would be the same.

3. **NORD DE GUERRE EASTINGS.**—Eastings on this grid are 100 kilometres greater on British maps than they are on French maps.

4. **POSITION.**—French grids may differ in position from their British equivalents. The maximum difference is of the order of 150 metres but it will generally be less. This is because the French have two surveys, an old one covering the whole country and a new one covering parts of it and their grids may be based on either one or the other. All grids on British maps are based on the old survey.

French Latitudes and Longitudes

French geographical values are expressed in grades and decimals of a grade instead of in degrees, minutes and seconds as on British maps. Instead of being divided into 90°, the quadrant is divided into 100 grades. In order to convert grades to degrees they must be multiplied by .9; this gives the answer in degrees and decimals of a degree, whence they can be converted into degrees, minutes and seconds. Hundredths of a grade are described as centesimal minutes and ten thousandths of a grade as centesimal seconds, and they may be denoted by symbols like grave accents as opposed to the British symbols which are like acute accents. French longitudes are given from Paris which is 2° 20' 13".95 E. of Greenwich.

The Belgians also use grades, and longitudes are given from Brussels, which can be assumed to be 4° 22' 12".7 E. of Greenwich.

German Grids

The Germans have divided their country into strips approximately 3° wide, each covered by a separate grid belt. Grid lines are numbered in the map margin in kilometres, the figures denoting thousands and hundreds being printed in smaller type than the remainder which alone are used in giving "short" references. Eastings (Rechts) are given first and then Northings (Hoch) as in the British system. The central meridians of the belts are multiples of 3° E. of Greenwich (6°, 9°, 12°, etc.) and the belts are numbered according to these multiples, so that the belt whose centre is 6° East is No. 2 and so on. In the figures denoting Easting, the first denotes the number of the belt, although it appears to indicate thousands of kilometres. For example the number 460 lies in belt No. 4, whose central meridian is 12° East. Although this system can easily be extended westward to cover occupied countries, the evidence at present available indicates that the Germans are not doing so. It is known definitely that they are using the native grid in Holland and they are probably doing the same in France and Belgium.

The sizes of grid squares on German maps vary; for example the 1 : 200,000 series has 10 km. squares and the 1 : 25,000 has 1 km. squares, like the British maps, but the 1 : 100,000 has 5 km. squares and the 1 : 50,000 has 2 km. squares. The giving of references on these maps is generally facilitated by the provision of a romer, which can be cut out, in the margin of the map (see figure). If romers are not available, care must be taken in referencing the non-decimal squares, to break them down into the proper divisions. Thus the squares on the 1 : 100,000 map must be broken down to fifths and fiftieths and on the 1 : 50,000 to halves and twentieths, in order to give references to the nearest 100 metres.

The Western boundary of any belt is an even 10 km. grid line of that belt, lying about half way between its central meridian and that of its neighbour. There is a danger that "short" references of points within 10 km. of a belt boundary may be duplicated by points between 5 and 10 km. away on the adjacent belt. This can be avoided to some extent by giving full references in these areas but there is still a possibility that a full reference given to the nearest kilometre might be confused with a "short" one given to the nearest 10 metres.

Dutch Grids

All but a few of the pre-war gridded Dutch Maps in our possession carry the old Bonne Grid in kilometres whose squares are numbered 0-40 west to East and 50-75 South to North over each whole 1 : 50,000 sheet. A reference is given by sheet number and square number.

Modern Dutch maps carry what is known as the Stereographic Grid in black with red or brown figures. This covers the whole country. The lines are shown at 1 km. intervals on the 1 : 50,000 and 1 : 25,000 maps, and full kilometre values are given to each grid line in figures of uniform size.

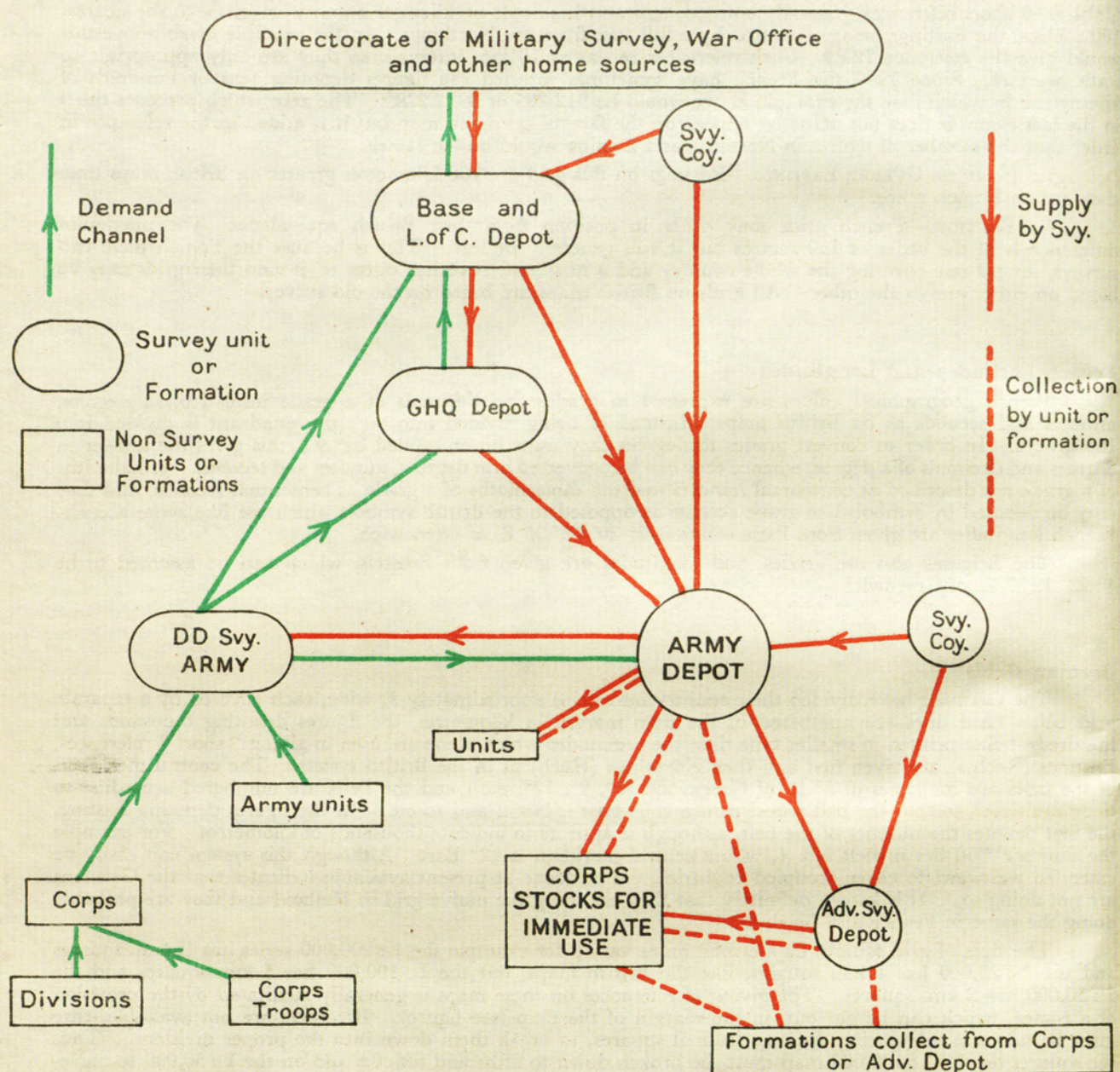
Captured German maps carry this new grid in black but it is shown at 2 km. intervals on the 1 : 50,000 series, and 5 km. intervals on the 1 : 100,000 series, in exactly the same way as German grids appear on their own maps. Figures denoting metres and tens of metres are printed larger than those indicating hundreds (figures indicating thousands do not appear since the area is not large enough to require them) and romers are provided for giving references in exactly the same way as they are on German maps.

Belgian Grids

The grid shown on Belgian maps is in orange in kilometre squares, each line being numbered in kilometres in the margin, in figures of uniform size. The way of giving references is not known but the Belgians probably follow the French practice.

If the Germans use this grid, as they are believed to do, it is probable that they will have modified it in the same way as the Dutch Grid (see above).

CHANNEL OF MAP SUPPLY FOR THE ARMY



Map Supply Channel

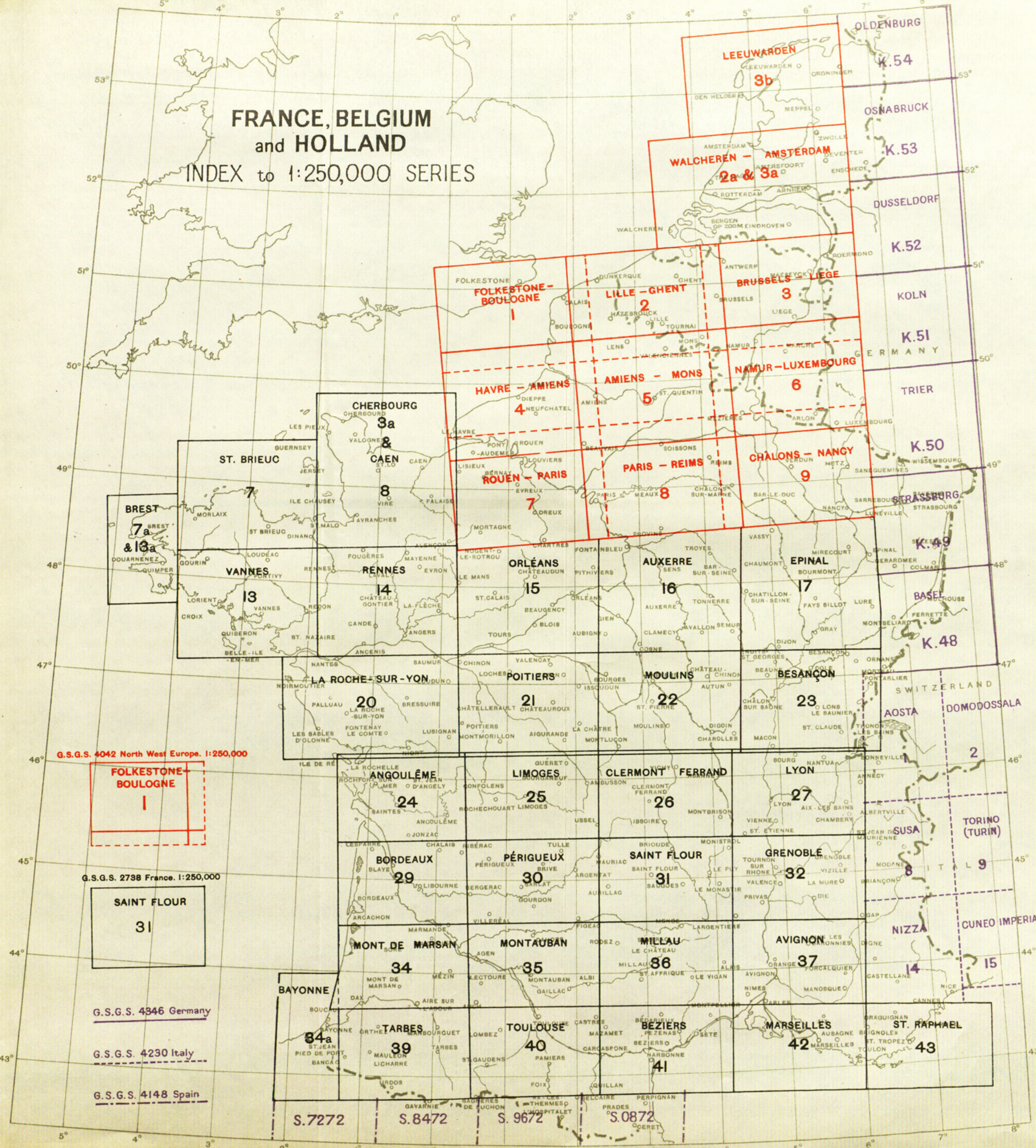
Directorate of Military Survey (Survey 3) arrange delivery of bulk stocks of all maps to Base Depots overseas, where they are distributed, as required, either to intermediate depots in L. of C., or near H.Q.'s of Army Groups, or, in some cases, may be consigned direct to Army Map Depots.

Further distribution to Corps and subordinate formations will be carried out in accordance with accepted policy governing map distribution.

D.D. Svy. at army holds a limited stock of all maps likely to be required by the Army H.Q. Staff for current operations and for future planning.

Scales of issue are laid down in W.O. pamphlet "Standard Scales of Map Issue, 1943."

FRANCE, BELGIUM
and HOLLAND
INDEX to 1:250,000 SERIES



G.S.G.S. 4042 North West Europe. 1:250,000

G.S.G.S. 2738 France. 1:250,000

G.S.G.S. 4346 Germany

G.S.G.S. 4230 Italy

G.S.G.S. 4148 Spain

S.7272

S.8472

S.9672

S.0872

G.S., G.S. 4083
(Not for Operational Use)

FRANCE, BELGIUM & HOLLAND

Index to 1:50,000 series

Complete sheet lines of G.S.G.S. 4250 & G.S.G.S. 4471 are shown. All sheets of these two series are not however available.

Scale 1:2,100,000 (Approx)
Kms 50 0 50 100 150
Miles 25 0 25 50 75 100

G.S.G.S. 4040

G.S., G.S. 4250

G.S., G.S. 4040

G.S., G.S. 4083
(NOT FOR OPERATIONAL USE)

G.S.G.S. 4471

G.S., G.S. 4250

G.S.G.S. 4471

G.S.G.S. 4229 ITALY 1:50,000

FRANCE, BELGIUM & HOLLAND

Index to 1:25,000 series

Scale 1:2,100,000 (Approx)
Kms 50 100 150
Miles 25 50 75 100

G.S.G.S. 4427

380 381
2NW 2NE

G.S.G.S. 4041

44 45
SW SE

G.S.G.S. 4347

34W 34E
SW SE

G.S.G.S. 4411

1/2 1/4
5/6 7/6

G.S.G.S. 4414

4202 4203
4202 4203

The sheets are referred to by the number followed by the letters NW or NE etc. eg 44NW.

The sheets are referred to by number and letters as in above series.

The sheets are referred to by the Roman & Arabic numbers, followed by the quarter sheet number. eg SHEET XII-23, 1 & 2.

G.S.G.S. 4041

THIS AREA TO BE COVERED BY G.S.G.S. 4365

G.S.G.S. 4411

ITALY 1:25,000
G.S.G.S. 4228

INDEX TO THE FRANCE & BELGIUM 1:100,000 SERIES

G.S.G.S. 4336
Shown in BLUE

FOR THIS AREA
REFER TO G.S.G.S. 4416

AREA A

AREA B

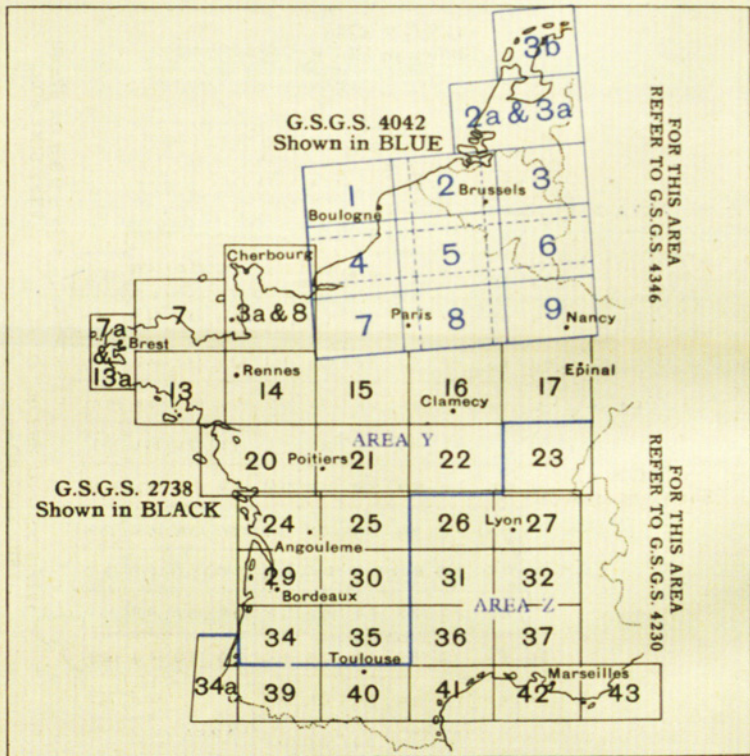
G.S.G.S. 4249
Shown in BLACK

FOR THIS AREA
REFER TO G.S.G.S. 4164

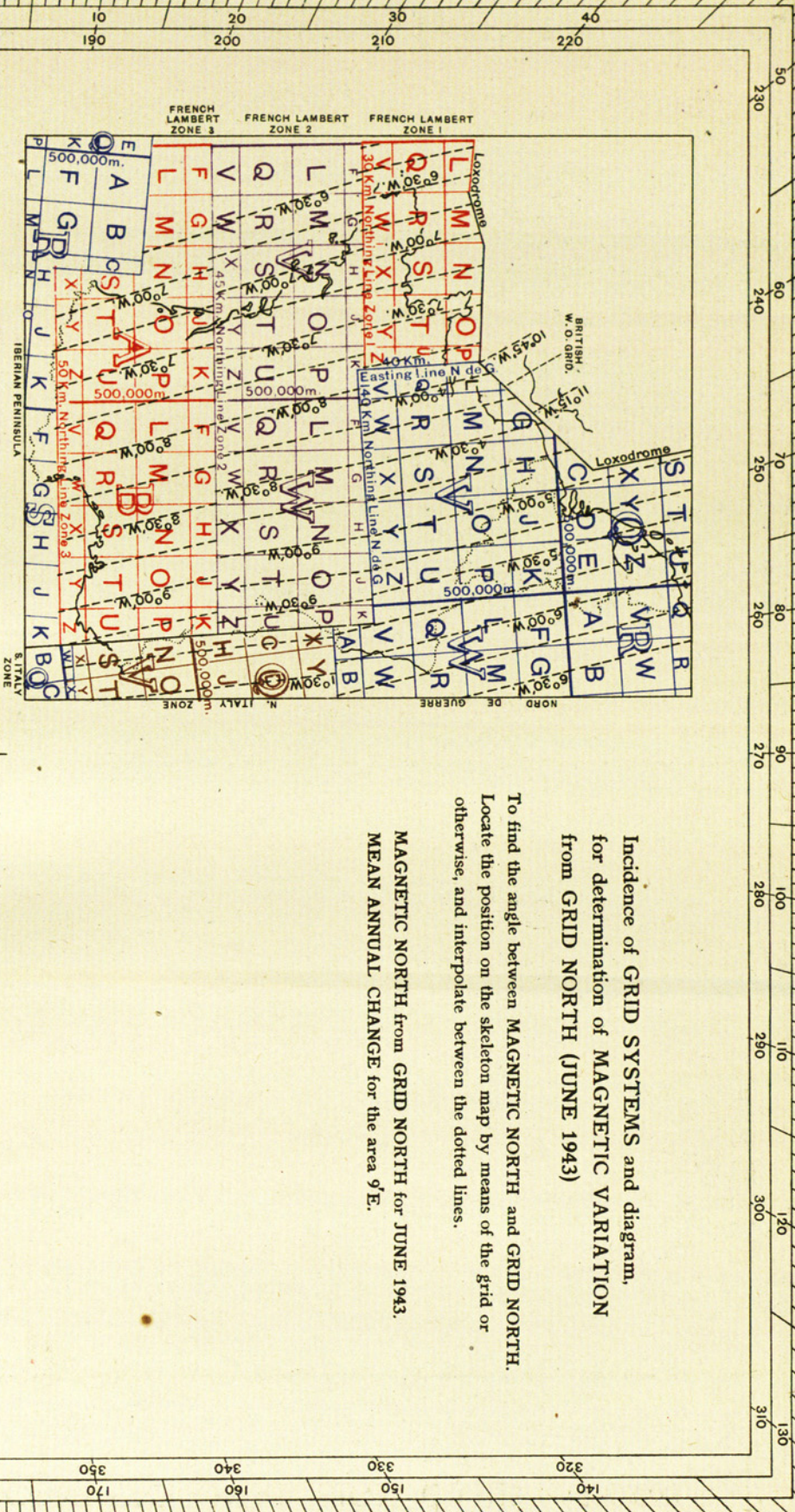
AREA C

AREAS REFER TO DIFFERENT LAYER INTERVAL SYSTEMS

INDEX TO THE FRANCE, BELGIUM & HOLLAND 1:250,000 SERIES.



AREAS REFER TO DIFFERENT LAYER INTERVAL SYSTEMS



Incidence of GRID SYSTEMS and diagram,
for determination of MAGNETIC VARIATION
from GRID NORTH (JUNE 1943)

To find the angle between MAGNETIC NORTH and GRID NORTH.
Locate the position on the skeleton map by means of the grid or
otherwise, and interpolate between the dotted lines.

MAGNETIC NORTH from GRID NORTH for JUNE 1943.
MEAN ANNUAL CHANGE for the area 9°E.

Cut out black portion.

50
330
230
60
240
70
250
80
260
90
270
100
280
110
290
120
300
130
310

G.S.G.S. 4249

Glossary

Descriptive names on the map have generally been Anglicised except where they form part of a proper name

Abt.	Abrévoir	Watering Place	Fmte. Fe	Farm
Aimes	Maison d'Allières	Asylum	Fortif., Ft.	Fortification, Fort
Arsl.	Arson	Cone	Fort	Forest
Asse	Asse	Asylum	Gte.	Gendarmerie
Aube	Auberge	Inn	Hal.	Gûe
Bac	Bac	Ferry	Lac	Hôpital
Bate	Bate	Bay	Marge	Marécage
Boscule	Boscule	Wigh-bridge	Mgnie	Montagne
Bois	Bois	Wood	Moine	Moulin
Batterie	Batterie	Battery	Mont	Mill
Bge.	Brigade	Dam	Mont	Mountain
Brigade	Brigade	Brickworks	Pecau	Poncau
Brusailles	Brusailles	Brushwood	Pge.	Passage
Buisson	Buisson	Thicket	Ph.	Phare
Cal.	Cal.	Small Inn	Plan.	Plateau
Canal	Canal	Canal	Pile.	Passerelle
Canon	Canon	Quarry	Pion.	Préfecture
Carre.	Carrière	Cross roads	Prison	Prison
Carref.	Carrefour	Barracks	Port	Port
Casse	Casse	Castle or Large	Pron.	Porton
Chau.	Château	Country House	R.	Rivière
Chce.	Chaussee	Road	Rou.	Ruisseau
Chlle.	Châlelle	Road	Rte. Nle.	Route Nationale
Chin.	Chemin	Chemin	Sabre	Sablons
Chire.	Chimère	Cemetery	Sablons	Sablons
Cler.	Cler	Betty	Sablons	Sablons
Comte.	Comme	Comme	Sablons	Sablons
Comm.	Commune	Commune	Sablons	Sablons
Dept.	Departement	Departement	Sablons	Sablons
Dig.	Digue	Digue	Sablons	Sablons
Ese.	Eglise	Eglise	Sablons	Sablons
Ety.	Etang	Pond	Sablons	Sablons
Fl.	Fleuve	River	Sablons	Sablons

G.S.G.S. 4336

ROADS IN HOLLAND

Road Classification is not based on reconnaissance, its reliability is uncertain.

National Highways (Rijkswegen) with 2 carriage ways, each over 6 metres wide, metalled. (4-way M.T.).
 National Highways (Rijkswegen) with 1 carriage way, & Main Roads, generally 6 metres wide or over, metalled. (Usually 2-way M.T.).
 Other Main Roads, generally 5 metres wide or over, metalled. (Occasionally 2-way M.T.).
 Secondary Roads, generally about 4 metres wide metalled. (Usually 1-way M.T.).
 Other Roads & Cart Tracks.
 Roads with Tramway.

ROADS IN GERMANY

Road Classification is not based on reconnaissance, its reliability is uncertain.
 Motor Highways (Reichsautobahnen, independent of road system) with 2 carriage ways, each metalled, & 7-5 metres wide.
 Connecting point with road system where known.
 Under construction.
 Main Roads (Reichsstrassen) with route numbers, metalled, & mostly 6 metres wide.
 Other Main Roads (Mostly Landstrassen 1. Ordnung), metalled, & 5-5 metres average useful width.
 Secondary Roads, metalled & 4 metres average useful width.
 Other Roads, & Cart Tracks.

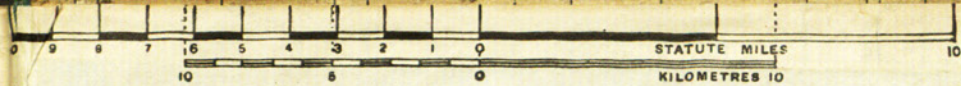
CONTOUR NOTE FOR G.S.G.S. 4249

Contours have been interpolated from spot heights and hachures on the French 1:80,000. Their probable accuracy varies with the number of heights and the nature of the ground. They should be accepted with caution. In areas other than those revised from Air Photographs no distinction has been made between Woods and Brushwood.

EXAMPLE OF A GRID REFERENCE ON THIS SHEET			
LETTER K			
POINT KERKHOVEN			
East		North	
Take West edge of square and read figures opposite this line on North or South margin or on the line itself Estimate tenths eastwards	27	Take South edge of square and read figures opposite this line on East or West margin or on the line itself Estimate tenths northwards	87
	4		6
East 274		North 876	
REFERENCE K 274876			
Unit.....metre		Square.....1,000	
Reference to nearest 100			
Nearest similar reference on this grid 500 Km. distant			

140
320
150
330
160
340
170
350

Cut out black portion.



Scale 1 : 250,000

Eastings
(1) Read off Grid Letter.
(2) Place arrow on point and read off Eastings.

GRID ROMER for 1:250,000 MAPS

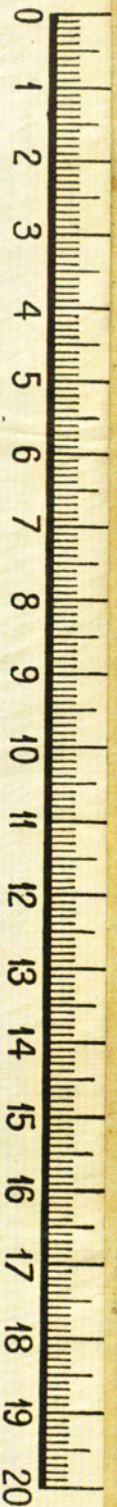
USE THIS WAY UP

(3) Place arrow on point and read off Northings.

REPRESENTATIVE FRACTIONS WITH THEIR APPROXIMATE VALUES IN INCHES TO THE MILE

1:1,000,000	...	...	...	...	...	...	1 inch = 16 miles
1:500,000	...	...	...	...	...	...	1 inch = 8 miles
1:250,000	...	...	...	...	...	...	1 inch = 3.95 miles
1:200,000	...	...	...	...	...	...	1 inch = 3.16 miles
1:100,000	...	...	...	...	...	...	1 inch = 1.60 miles
1:50,000	...	...	...	...	...	...	1 inch = 0.79 miles
1:25,000	...	...	...	...	...	...	1 inch = 0.39 miles
1:10,000	...	...	...	...	...	...	1 inch = 0.16 miles

SCALE OF CENTIMETRES



USE THIS WAY UP

(1) Read off Grid Letter.
(2) Place arrow on point and read off Eastings.

Eastings

GRID ROMER for 1:100,000 MAPS

(3) Place arrow on point and read off Northings.

Scale 1 : 100,000



