
Operation Market Garden 2004

PLANNING

The Players Brief

But, Mousie, thou art no thy lane,
In proving foresight may be vain:
The best laid schemes o' mice an' men
Gang aft a-gley,
An' lea'e us nought but grief an' pain
For promised joy

(Robert Burns 1759-1796)

Roles

You have a key player role in Operation Market Garden 2004 - and as such you are invited to take part in an online the planning game to prepare your operational plan.

Because of the international nature of the game, the planning for the Operation Market Garden megagame will be conducted via email.

The Planning Game is a streamlined reconstruction of a number of planning meetings carried out over the 7 days available to plan the actual operation. In the original planning process such a single meeting could not have happened, since the air and ground HQs were separated by the English Channel.

The players in this planning game play the following roles:

Formation	Personality	Current Player
2 nd Army Commander	Lt General Miles Dempsey	To be allocated
XXX Corps Commander	Lt General Brian Horrocks	Simon Cornelius
1 Airborne Corps Commander	Lt General 'Boy' Browning	Fang-Piao Chiang
Air Forces Commander	Maj-Gen Paul L. Williams	Frits Kuijman
1 British Airborne Division	Major-Gen Robert Urquhart	Jim Roche
82nd US Airborne Division	Major-Gen Jim Gavin	Frank Aben
101st US Airborne Division	Major-Gen Maxwell Taylor	Matt Kelland
Guards Armoured Division	Major General Allan Adair	Rene van der Assem
43rd Wessex Division	Major General Ivor Thomas	Geoff Wootten
50th Northumbrian Division	Major General D.A.H. Graham	Patrick Cannaerts
VIII Corps	Lt General Sir Richard O'Connor	Julian Fuller

Formation	Personality	Current Player
XII Corps	Lt General Sir Neil Ritchie	Dave Boundy

The listed players are the current commanders. This might change. Commanders may enlist the assistance of others who are on their team – but they must remember that they have the final word for their team. Check out the game website for the latest teams lists, if you're not sure. A list of known emails for the Allied side is at the end of this briefing.

Jim Wallman will be the main contact point for queries and further information – email omgplanning@pastpers.co.uk

IMPORTANT: Email Planning Guidelines

1. **ALL planning game emails must have the words 'OMG PLAN'** in the subject header.
2. **ALL Planning emails must include Jim as a copy addressee.** This is so that he can help if it looks like you're making the wrong assumptions or getting too tangled or confused.
3. **All emails must have your 'In Character' name at the end.** It is important that everyone understands from the outset that some players outrank others – and that different characters have different perspectives.
4. Emails that are nothing directly to do with the planning discussions should be marked clearly as 'OOC' (Out Of Character). Sometimes these sort of discussions can get quite heated 'in character' – it is important to maintain that distance between game and real life.
5. Keep the other players informed. Even if, say, a divisional commander isn't involved in every point of discussion, try to include them in your email address list for most mails. Remember to use 'Reply All' at all times when replying to planning emails.

Involvement and responsibilities

2nd Army Commander – chairs the planning session. This role is only played in the planning game and is not replicated in the main game. The primary purpose of the Army commander is to make sure a plan is arrived at in the time available, and to prevent the whole thing from becoming bogged down. Note that 2nd Army commander is a player and not part of the Game Control Team.

Corps

Corps Commanders – responsible for the overall Corps plan during Operation Garden.

Divisional commanders are responsible for the initial plan (including detailed orders for the first game turn) for their the units in their divisions – in accordance with the general direction and objectives set out by the corps commander.

Airborne Corps Commander

I Allied Corps Commander is responsible for the overall I Allied AB Corps plan, Operation Market. This includes defining timings, objectives and the areas of operation for each Division employed.

Airborne Divisional Commanders are responsible for detailed dropzone planning, in conjunction with the Air Commander, and for deciding, in detail, the initial deployment of their divisions, given the overall plan as set down by the Corps Commander.

Air Forces

Allied Air Forces commander is responsible for the entire air plan, including all air transport.

Flanking Corps Commanders

They have the responsibility for detailed planning (and first turn orders) for the divisions under their command. This will be in consultation with the XXX Corps team.

THE PLANNING PROCESS

The plan will have to be developed in three distinct stages. The Commander of 2nd Army will inform everyone when each stage has been completed and move the planning process on.

At each stage only the questions to be answered in that stage should be discussed.

This is a large and ambitious project – if you get sidetracked your plan will suffer.

STAGE 1 – THE BIG PICTURE

Historically this was decided by Montgomery and there was no discussion to speak of. In this game, the senior commanders can debate the issue – though Dempsey's word is final.

In this stage the planners (Corps Command and above) must decide on the divisional areas of the airborne divisions, and the corps boundaries between 30 Corps and the flanking corps.

Once this has been fixed, it should not change.

STAGE 2 – CORPS LEVEL PLANNING

Operation Garden:

Each Corps team must discuss (in conjunction with Divisional Commanders)

- Who keeps the Corps Axis of advance clear.
- Order of March (especially bridging columns and boats)
- RV points with AB forces
- Attachments to AB forces.
- Air Cover from Tactical Air Force
- Air resupply. The single road will pose considerable difficulties, should you insist on at least some air re-supply?

Once 2nd Army Commander is satisfied all these points have been covered, each Corps Commander is to:

1. Write The Corps Plan
2. Write Orders for divisional teams – these orders are in terms of general objectives and timing – not detailed orders for sub-units.

Operation Market

1. The Airborne Corps Commander in consultation with his Divisional Commanders and the Air Commander must discuss:

- Divisional Landing Zones (LZ) and Drop Zones (DZ)
- Air resupply arrangements
- Order of arrival air transport serials (in conjunction with the Air Commander)
- Time and means of arrival of Corps HQ

Once 2nd Army Commander is satisfied all these points have been covered, the airborne corps commander is to:

1. Write The Corps Plan
2. Write Orders for divisional teams – these orders are in terms of general objectives and timing – not detailed orders for sub-units.

Air Planning

The Air Force Commander must provide air support and transport for the operation in the most efficient manner possible, keeping due regard for the survivability and maintainability of the tactical and transport air forces, and keeping to a minimum the casualties of both air and airborne forces. Points to cover include:

- Air transport sorties - numbers etc
- Air resupply sorties
- Air cover arrangements (CAP, Flak suppression etc)
- Close Support arrangements with XX Corps and Flanking Corps.
- Drop Zones and Landing Zones for AB forces.
- Routes to the DZ/LZ areas.

The Air commander's planning task is probably the hardest because he has to make sure a large number of conflicting requirements are dealt with.

Once 2nd Army Commander is satisfied all the key points have been covered, the air force commander is to:

1. Write a summary of the air plan
2. Make a list of the air efforts for each day of the operation - showing how many air units are being used in each role on each fly-in route or mission.

STAGE 3 – DIVISIONAL LEVEL PLANNING

All the Divisional Commanders will have received orders and will have been party to the planning in Stages 1 and 2 above.

In Stage 3 the Divisional Commanders must write orders for the first game turn of the megagame. They can do this in conjunction with their divisional payer team, and seek advice from their Corps commander and the Air Commander.

We will supply a copy of the turn 1 order sheet in Word format, and it can be emailed to Game Control.

SECOND ARMY'S ADVANCE FROM THE SEINE

Second Army established bridgeheads over the SEINE and were quickly established at VERNON and east of LOUVIERS. The enemy opposition was light as a result of an American sweep through the country along the west bank. The advance was delayed, however, because Second Army had to cross the line of the American thrust.

The advance from the 30 Corps bridgehead started on 29 August. Bad weather and some opposition delayed matters somewhat, but on 31 August, after an all-night advance, 11 Armd Div crossed the SOMME at AMIENS. By nightfall Guards Armd Div further east had elements astride the ALBERT-AMIENS road. One bde of 50 Div also reached AMIENS. The Corps had advanced 128 kilometres in 2 days.

The advance of 12 Corps started from the 15 Div bridgehead on 30 August and by the same evening 4 Armd Bde had advanced over 48 kilometres to reach GOURNAY and 53 Div were on their left in the LYON FORET area. On 31 August, 7 Armd Div had come up and reached POIX followed by 53 Div who were mopping up enemy pockets bypassed by the armour.

On 1 September, Guards Armd Div bypassed ARRAS and elements reached DOUAI and LENS. On their left, 11 Armd Div reached the road ARRAS-ST POL. 7 Armd Div bypassed enemy resistance at AIRAINES and also crossed the SOMME.

In the next 3 days the advance continued rapidly, Guards Armd Div, now with a Belgian Bde under command, captured TOURNAI and crossed the ESCAUT canal on 2 September. The div entered BRUSSELS on the afternoon of 3 September and by last light had control of all the main exits.

11 Armd Div bypassed LILLE and after an advance of 97 kilometres on 3 September, were in the area of ALOST by last light. On 4 September, 11 Armd Div were in ANTWERP and 50 Div reached ALOST. The city of ANTWERP was firmly in our hands, but the northern suburbs adjoining the dock area remained to be cleared.

30 Corps spent the next few days improving their positions in the ANTWERP-MALINES-LOUVAIN-BRUSSELS area. Meanwhile, 12 Corps had moved on and cleared the ST POL-BETHUNE-LILLE area, and 7 Armd Div captured GHENT on 6 September.

THE CURRENT SITUATION OF 21 ARMY GROUP

On the 4 September 30 Corps was in the area ANTWERP-LOUVAIN-BRUSSELS; 12 Corps was clearing the area LILLE-ARRAS-ST POL and 8 Corps was in reserve a few miles north of the SEINE. Twelfth US Army Group have been advancing astride the ARDENNES and First Can Army are clearing the Channel coast.

The intentions of 21 Army Group are:

- a. to advance eastwards and destroy all enemy forces encountered.
- b. to occupy the RUHR and get astride the communications leading from it into GERMANY and to the sea ports.

The RUHR is to be bypassed round its northern face and cut off by a southward thrust through HAMM. Until the logistic situation permits the employment of First Can Army further forward, the main portion of 21 Army Group's task has devolved to Second British Army.

The first stage of Second Army's operation is to be an advance from the general line of the ALBERT and ESCAUT canals in Belgium to the ZUIDER ZEE. The main body of the Army will then swing east while one division, or if necessary a corps, will turn westwards towards ROTTERDAM and AMSTERDAM.

On 10 September it was decided that Second Army would be assisted by an Airborne Corps which will come under command on landing.

Preliminary Operations In Progress

On 7 September, Guards Armd Div occupied DIEST and on the following day secured a bridgehead over the ALBERT canal at BEERINGEN and pushed on to HELCHTEREN and BOURG-LEOPOLD. In conjunction with 11 Armd Div who came up on their right flank, they have advanced to the area PEER-OVERPELT, and by 11 September a bridgehead was established over the MEUSE-ESCAUT canal north of OVERPELT. Patrols have also reached the canal at BREE and LANKLAER.

Further west, 50 Div had established a small bridgehead over the ALBERT canal south of GHEEL by 8 September and have gradually expanded it until they were relieved by 15 Div. The latter secured a bridgehead over the MEUSE-ESCAUT canal at AART on 14 September.

In the meantime Second Army has been regrouping. 8 Corps (comprising 11 Armd Div and 3 Div) have formed on the right, 30 Corps (comprising Guards Armd Div, 43 Div and 50 Div) are in the centre and 12 Corps (7 Armd Div, 15 Div and 53 Div) are on the left.

Enemy Situation

The enemy is fighting determinedly along the general line of the ALBERT and ESCAUT canals from and inclusive ANTWERP to MAASTRICHT. The enemy reaction to the establishment of bridgeheads over the canals has been sharp and there have been a number of counter attacks. His line has been held by the remnants of some good divisions, including parachute divisions, and by new arrivals from Holland some of which have been withdrawn across the SCHELDT estuary. The enemy has been progressively withdrawing his forces across the SCHELDT estuary while holding both banks of it.

Information on enemy formations likely to be involved in MARKET GARDEN is far from clear. The chief factor in the current uncertainty is the movement of miscellaneous units across the mouth of the SCHELDE and thence into southern HOLLAND. It is estimated that by 17 September about 70,000 men may have crossed the river, and although much of their equipment has been abandoned, some 400 guns have probably been taken with them, mainly coastal artillery and flak units.

From ANTWERP eastwards the general character of the opposing forces has altered little during the last few days, and apart from 719 Division they are largely made up of paratroops, German Air Force personnel and a contingent of SS.

The enemy are fighting well but have very few reserves. The total armoured strength is probably not more than 50-100 tanks, mostly Mark IV. There are definite signs that the enemy are strengthening the defences of the river and canal lines through ARNHEM and NIJMEGEN, especially with flak, but the troops manning them are not numerous and many are of low category. The flak is sited for dual purpose role - both AA and ground.

OPERATION "MARKET"

"MARKET" is the codename given to the airborne operation to assist Second Army in their advance to the ZUIDER ZEE.

Under the command of First Allied Airborne Army, it will be carried out by HQ British Airborne Corps with 1 British Airborne, 82 American Airborne, 101 American Airborne Divisions with 1 Polish Parachute Brigade and certain additional specialist units shown, under command.

Aircraft and gliders will be provided for these troops by 38 and 46 Groups RAF and Ninth United States Troop Carrier Command.

Air support and air escort will be provided by 2 Tactical Air Force, 2 and 11 Groups RAF (Air Defence of Great Britain - ADGB) and Eighth United States Air Force (both fighters and bombers); under the control of HQ Allied Expeditionary Air Force. All arrangements for air support will be made with AEAF.

OPERATION "GARDEN"

"GARDEN" is the codename given to the operation for the advance by Second Army from the general line of the ALBERT and ESCAUT CANALS in BELGIUM to the ZUIDER ZEE in HOLLAND. The Airborne Corps will come under the command of Second British Army on landing.

The advance will be on a very narrow front, with only one road most of the way, through EINDHOVEN - ST OEDENRODE - VEGHEL - UDEN - GRAVE - NIJMEGEN - ARNHEM - APELDOORN - ZUIDER ZEE at NUNSPEETS. It will be carried out by 30 Corps, with 8 Corps on the right, and 12 Corps on the left, advancing more slowly on the flanks.

The distances to be covered are approximately as follows:

Start line, 30 Corps, to EINDHOVEN	21 kilometres
" " to UDEN	51 kilometres
" " to GRAVE	69 kilometres
" " to NIJMEGEN	85 kilometres
" " to ARNHEM	103 kilometres
" " to ZUIDER ZEE	159 kilometres

Second British Army, after hard fighting in NORMANDY, have advanced about 450 kilometres from R. SEINE to the ESCAUT CANAL between the end of August and 11 September. Their lines of communication run from the beaches near CAEN by road, with no intermediate ports and practically no assistance from the railways, but with some assistance from airlifted supplies. There are just sufficient supplies, ammunition and vehicles to equip and transport 30 Corps provided the opposition is not great. The shortage of supplies in the forward area will prevent any chance of a quick advance by either 8 or 12 Corps. In addition the ground supporting organisation of the Tactical Air Force is under severe strain.

The German Army has been overwhelmed in France and, although fighting hard on the ALBERT and ESCAUT CANALS in BELGIUM, is believed to be in no fit state to resist another determined advance. It is considered that once the crust of resistance in the front line has been broken, the German Army will be unable to concentrate any other troops in sufficient strength to stop the break-through. It is expected that enemy forces in the area will be ill organised and of varying standards. It is not likely that any mobile force of a size greater than brigade group, with few tanks and guns, will be encountered by the airborne forces prior to relief by the ground forces. Actual enemy defensive positions are being improved rapidly, particularly in the NIJMEGEN - MAAS - WAAL CANAL area. However intelligence suggests that these will be inadequately manned unless D-Day is postponed to any great degree.

On the assumption that Operation MARKET is successful, it is estimated that 30 Corps might reach the ZUIDER ZEE between 2-5 days after crossing the start line. They are expected to reach ARNHEM between D+1 and D+3.

Weather And Terrain

The long range weather forecast is good for the next two weeks although this is subject to the usual sudden changes at this time of year.

Detailed weather reports are supplied for four days in advance and updated daily.

Generally speaking the country does not suit rapid advances. There are many canals in addition to the three major rivers. Much of the country off the roads is unsuitable for tanks and heavy vehicles.

Photographic interpretation and reports of Dutch officers who have lived and trained in the area suggests that much of the ground, especially between NIJMEGEN and ARNHEM, is boggy with numerous large dykes. This will preclude the use of large scale glider landings and will force dispersion of parachute landings and cause delays during concentration.

TOPOGRAPHICAL APPRECIATION OF THE AXES OF ADVANCE AND OF RIVERS WAAL AND NEDER RIJN

WESTERN AXIS

ESCAUT Canal - EINDHOVEN

First class road 25-30 ft wide with a tarmac surface and ample grass verges in most places. Parts of the road, however, are embanked and flanked by ditches. Deployment is difficult except in sandy woodland areas immediately on either side of the road between VALKENSWAARD and EINDHOVEN. This stretch is also suitable for the dispersal of vehicles, as there are many wooded stretches which also are most suitable for the defence.

EINDHOVEN

Except for the main north-south road the streets are tortuous and narrow.

EINDHOVEN - GRAVE

Shown as first class road, width 7-10m, but in places the road surface is very bad. Deployment is possible along most of its length except between ZON and ST OEDENRODE where the surrounding country is peaty, and in the neighbourhood of GRAVE where the road is embanked with ditches on either side.

The bridge over the WILHELMINA Canal is a Class 40, but can only take single line traffic (70 vehicle points per day). That over the ZUID WILLEMS VAART Canal is shown on a German map, corrected to March 1943, as having a maximum load capacity of 16 tons.

GRAVE to NIJMEGEN:

First class road with concrete surface, 7-10m wide and two cycle tracks 1.5m wide, flanked by broad grass verges. (= effectively no capacity limits). From GRAVE to where the road joins the railway, the road crosses the MEUSE valley polders which are intersected by hedges, trees and ditches, except for a stretch on an embankment half a mile each side from the MEUSE bridges. From the intersection with the railway, the road follows the railway through country dotted with clumps of trees or bushes and villas. Almost the whole of the road is dominated by the high ground SOUTH and EAST of NIJMEGEN.

NIJMEGEN to ARNHEM:

The old road via ELST varies from 7m to 12m in width. The surface is concrete for most of the way, though parts are of rolled clinker. The road crosses the WAAL river by a new bridge, to LENT and traverses the open cultivated plain to the lower RHINE through flat open fields lined with deep ditches and small scattered orchards near the villages. The road is raised about 1.5-2m above the surrounding country. Firm dry, sandy soil. Trees along the roadside and the orchards afford the only cover as far as ELST, whilst deployment is limited to several secondary roads.

Dimensions: Width at ARNHEM approximately 90m. In winter the width of the river may increase to 500m. Depth: 2-4m.

Current. The tide is noticeable as far as CULEMBOURG.

Banks. The river is fairly constricted between dykes along the river banks. These dykes are normally of earthen construction reinforced at intervals by stone setts.

There is normally a towpath along one bank, though the path frequently changes from one bank to the other.

There is little cover on either bank of the River EAST and WEST of ARNHEM.

PLANNING GUIDANCE

AIRBORNE FORCES PLANNING

WEATHER

Weather can be the deciding factor in an airborne operation. If the operation is an essential element of a combined airborne/ground (and/or seaborne) operation the whole operation becomes dependent on the weather. Adverse weather can affect both the assault phase and the subsequent build-up and maintenance of the airborne force. The plan must therefore allow for postponement of all or part of the airborne forces employed.

AIR SUPERIORITY

Transport aircraft are particularly vulnerable to air attack and AA fire. Air Superiority is an essential prerequisite to any airborne operation. Sufficient fighter cover must be made available to keep off enemy fighters and suppress enemy flak positions. Flak suppression cannot be assumed to remove all flak threats, since the Germans are known to move and carefully camouflage flak to avoid the effects of flak suppression operations.

During protracted operations the enemy are likely to concentrate their air resources on attacking our transport aircraft on resupply duties. Air superiority must therefore be maintained throughout operations until supply by road can be organised.

So long as air superiority is maintained, and good communications exist to rear HQs, air power can be used to supplement the airborne forces' artillery by providing ground attack missions.

SURPRISE AS A WEAPON

The surprise effect of airborne forces must be utilised to the maximum. Airborne forces should not be committed against alert, immediate and direct opposition. Airborne forces are trained to use the time of maximum surprise

and enemy confusion (just after landing) to establish and organise themselves before the enemy recovers.

Having recovered from the surprise, the enemy reactions on the ground are likely to take the form of increased resistance, commitment of reserves, counter-attack and attack on the DZs, LZs and SDPs; especially with artillery.

In country where enemy mobility is good and superior weapons can be brought into action quickly against the airborne forces, reinforcement by conventional ground forces should occur **within 48 hours** of the initial landing. Artillery support from outside units should be provided earlier if possible.

If the airborne forces are to be reinforced with air transported units then this reinforcement should take place before the enemy has recovered sufficiently to mount counter-attacks and/or interdict the airfield to be used. It is unlikely that such conditions will occur during this operation.

MOBILITY AFTER LANDING

The problem of transporting sufficient transport, reconnaissance or gun towing vehicles with the airborne forces will restrict mobility on the ground to that of heavily laden marching troops.

RESTRICTED FIREPOWER

Within the airborne forces as a whole there is a lack of heavy support equipment; in particular artillery and the attendant towing vehicles. This, allied to the large airlift required for ammunition of all types means that there is a serious deficiency in supporting firepower.

VULNERABILITY DURING LANDING AND ASSEMBLY

The aim must be to land troops in areas that cannot be covered by enemy fire and which are immune from enemy counter-attack for sufficient time to enable troops to assemble for co-ordinated offensive/defensive action. Owing to the restricted size and number of anti-tank guns and mines the troops are particularly vulnerable to tank attack at this time. Remember also that parachute troops have NO anti-tank guns available for the vital first minutes after landing.

DROP ZONES (DZ)

A British parachute brigade or US parachute regimental combat team can be dropped into an area 1km x 1km.

From a daylight jump a battalion can be assembled and leaving the DZ in as little as 60 minutes. Although there will still be absentees due to refusal, dispersal and jump injury, the battalion can be regarded as a formed fighting force an hour after dropping.

All DZ should be clearly identifiable from the air to avoid navigational problems. Although they will be marked by pathfinders, problems ranging from enemy interference to equipment failure could render them ineffective. The transport aircrew must be capable of finding the DZ unaided, so lots of small, isolated or confusing DZ locations should be avoided.

The DZ should be flat, firm and open for the best landing results. Uneven or sloping ground will result in a higher number of accidents. Soft ground can result in lost equipment and longer recovery times. DZs cluttered with trees, vegetation and habitation result in more accidents, increased dispersal, time and confusion.

The DZ should, as far as possible, be clear of enemy troops.

LANDING ZONES (LZ)

An area 1km x 1km can accommodate the gliders from 3 glider serials on the ground. Whereas in the case of Drop Zones (above) the same DZ can be used for successive drops, this is not true of LZs. To avoid unnecessary accidents with landed gliders successive glider landings should be to separate LZs.

Each glider load is usually a self-contained tactical sub-unit and so glider troops suffer much less from dispersal. Gliders are essential to the operation of the division because they carry the heavy equipment and divisional infrastructure.

DZs and LZs should be separate. A DZ could, exceptionally, be used as an LZ for a successive landing, but uncollected parachute silks and rigging can disable vehicles as they move off the LZ.

The Netherlands is a low-lying country and the terrain is often separated into small fields by dykes and ditches with many of the major roads and the railways on raised embankments. Overall the ground is softer than is desirable for glider operations. Where possible higher ground should be selected for LZs. Unfortunately, the higher ground in the Netherlands is often forested.

SUPPLY DROP POINTS (SDP)

During an airborne operation, before link-up with ground forces, the location and control of the SDPs is vital for continuing operation.

It is of paramount importance that SDPs are easily identifiable from the air because it is unlikely that electronic aids will be available on the ground. Normal visual aids, such as panels or smoke, will be available but the aircrew should not have to rely on these to find the SDP.

The SDP can be regarded as the airborne divisional supply dump. The location of the SDP is therefore very important - especially if the division plans to move.

The size of the SDP is important. Too small an SDP means that the transport aircraft have to 'queue' to drop supplies and are much more vulnerable to flak and air attack. Too large an SDP makes collection of supplies difficult and protection from ground attack harder too.

COUP DE MAIN OPERATIONS

US airborne forces lack the right sort of glider for Coup De Main type operations, and they do not have either the training or the doctrine to carry out such operations.

Coup De Main operations have only been tried by British airborne forces and if we discount raids (such as Bruneval and Ponte Vecchio) and brigade operations (Primosole and Ponte Grande), the Coup De Main has only been used on three occasions during the Normandy campaign.

Two of these operations involved glider assault so that troops could be delivered in compact formations direct onto the objective. This sort of operation normally requires months of training. Of the three operations conducted so far, one was a complete success (Pegasus Bridge) and two less successful (Merville Battery and Caen).

GLIDER PILOTS

The British doctrine on glider pilots is that they are soldiers and must contribute to the ground battle. The total 26 serials will contribute 2 Wings (Wing = battalion equivalent) of Glider Pilots after landing.

These glider pilots are a valuable commodity and should be regarded as a final reserve. Every single glider pilot in the British Army is being used in this operation, so do not lose them! On link-up with XXX Corps, the Glider Pilots are to be withdrawn to Britain.

US FORCES

The US airborne division tends to have a centralised use of divisional assets.

Each parachute infantry regiment (PIR) has a regimental HQ, 3 parachute infantry battalions and a service company (of jeeps for transporting supplies). The glider infantry regiment (GIR) is the same, but also has anti-tank guns.

The US AA/Atk Battalion has 6 companies, 3 A/Tk and 3 AA. This allows the divisional commander to either spread A/Tk resources about the PIRs, or hold them in a key location. The AA companies are usually used to protect the HQ and Supply zone.

GROUND FORCES PLANNING

CORPS ORDERS

The German Army is still disorganised after their defeat in Germany, and are streaming back to the Fatherland as fast as they can go.

At long last 21st Army Group have got permission to use part of General Brereton's First Allied Airborne Army, in the shape of an Airborne Corps, under the command of General Browning.

This Corps will seize the bridges ahead of your advance. They will thus form a bridgehead through to the north side of the Neder Rijn. They will also lay down an airborne carpet from EINDHOVEN to NIJMEGEN. Gen Browning will plan this aspect in consultation with Gen Horrocks.

The Corps is to plan the breakout from the MEUSE-ESCAUT Canal line. In the subsequent advance of XXX Corps through the airborne carpet the Corps is to advance right up to the ZUIDER ZEE. On the right flank will be VIII Corps, and on the left XII Corps.

AIR SUPPORT

The Bomb Line (the area beyond which Allied air forces can operate freely) is set automatically ahead of your forces as they advance. Your staffs will set and maintain safe distances without any need for you to do it.

Supporting ground attack aircraft can operate as close to your own forces as the ground commander (Gen Horrocks) wishes. In the context of the game, ground attack sorties are allocated to a particular unit (or units) attack, and added to that unit's effectiveness.

Requests for interdiction, recce or CB sorties are made to the Air Commander through Corps, who will advise on availability.

MOVEMENT

As a guide, the ABSOLUTE MAXIMUM movement distance, in kilometres, are shown below.

Unit movement will almost always be much less than this maximum, especially the road movement rates which can be affected by weather, congestion, choke points and other road conditions

*REMEMBER, THESE FIGURES REPRESENT
THE UNINTERRUPTED MAXIMUM MOVE.*

Troops	Ground	Tactical	Non-tactical	Road Column	River Crossing
Horse drawn Infantry & Paras.	All terrain	15	25	30	Possible
Mech. or motorised	Close	18	28	64	impossible
	Open	30	32	64	impossible
Tanks or SPGs	Wood/ Town	18	28	64	impossible
	Marsh	8	18	64	impossible
	Open	30	32	64	impossible
Motor towed arty	All terrain	-	-	75	impossible
Recce and lt. tanks	Close	18	28	100	possible
	Open	30	35	100	possible

Obviously, movement can be interrupted for combat. Armoured units which are *breaking through*, may move on after a combat - depending upon how fierce the fighting was.

Examples of things that slow down unit movement

- Moving down narrow, twisty lanes
- Coming under fire
- Traffic jams
- Bad weather
- Preparing for an attack
- Making tea (British units only)

RIVER CROSSING

On the operational maps only important river obstacles of are marked. There are numerous less important obstacles that have been factored into the movement rates.

Units indicated above as 'River Crossing = impossible' can only cross any marked canal or river obstacle at a bridge.

Other units may cross canals and minor rivers, but not major rivers without a marked bridge (using minor unmarked footbridges and locks or otherwise improvising).

Most bridges have a weight classification. For most purposes we are interested primarily in whether tanks can cross.

Therefore there are only two classifications of bridge/Ferry:

a. **Light bridge/Ferry** - equates to the Class 9, and is only passable for infantry and transport units (but not loaded tank transporters).



b. **Heavy bridge/ferry** - equates to a class 40 Bailey bridge (or larger) and is passable to all types of unit



TRAFFIC

Unit Points

At any major crossing, the bridge or ferry will be given a capacity in terms of **'Unit Points Per half day'**.

Each unit is given a score (indicating its size in vehicles). During any major troop movement, bridges will form the main choke points for traffic, and this will be reflected in the game.

Typically, unit sizes are :

Infantry Battalion	1
Armoured battalion	2
Artillery battalion	3
Divisional HQ	5

The capacity of typical river crossings and choke points, in points per half day, will be:

Crossing type	Capacity in points
Civilian Ferry	4
Main road bridge	120
Minor road bridge	40
Bailey bridge	30
Rail bridge	20
Light military bridge	15
Military ferry	5

Other choke values:

Route type	Capacity in points
Town with "crowds of cheering civilians"	50
Main road, double lane	120
Main road, single lane	60

None of these figures are hard and fast, of course. Circumstances can dramatically alter the capacity of a given river crossing. The above figures must be regarded as only a general guide.

Column Lengths

When in 'road column' the unit points also indicates the amount of road space the unit takes up in kilometres.

Supplies

Units cannot attack without supplies.

Supplies are only used up in the attack. Units use supplies as follows:

ANY ATTACK	1 Supply point per battalion-sized unit (or 3 per brigade-sized unit)
ANY ARTILLERY USE	1 Supply point per unit (this includes artillery used in defence).
DEFENDING	No Supply points
ARMoured, MOTORISED and MECHANISED UNITS	1 FUEL Supply point per battalion-sized unit per turn moved or in combat - either defence or attack. (or 3 per brigade-sized unit)

Combat Assumptions

- Paratroops and some German infantry formations lack substantial numbers of heavy weapons, and are therefore disadvantaged in the attack, or facing tanks in open country.
- Infantry have an advantage over tank formations when defending built-up areas or closely wooded country.
- It takes time to do anything. For the vast majority of units, the following timings apply:
 - a. To prepare a brigade/battalion for an attack **takes half a day (that is one complete game turn)**.
 - b. Attach a battalion to a new division **takes half a day**.

Players must have allowed for these timings in their orders.

Supporting Artillery

Unit	Effective Range (km)	Long Range (km)
Field Artillery	8	12
Medium Artillery	12	20
Rocket Artillery	6	n.a.
Infantry Guns	6	n.a.

Defending artillery specifically allocated to the task can be counted as support for defenders but obviously uses ammo in the process.

SHAEF INTELLIGENCE SUMMARY

September 1944

Good German bodies and souls are dropping in thousands by the wayside, and will be missing in the hour of the defence of the Fatherland. Even those that get back will get back too late. The whole wreck of the Balkans and Finland may yield up perhaps half a dozen divisions.

These will go no way to meet the crying need for more divisions to man the West Wall; moreover, a line in Transylvania will need to be manned. Where, then, are more divisions to be found? Not in Norway, withdrawal would take too long, and the troops are of too low a category to be worth much; they pay more dividends where they are. Denmark might still supply one division, and a dozen or more may yet be found in Germany, given time, from training units, remnants and so forth. The Italian and Russian fronts risk collapse if anything more is withdrawn from them. In Italy, in particular, any form of withdrawal to the Alps would probably cost as many men in casualties as it saves by improving the line, even if complete disaster is not incurred in the process. In short, C-in-C West may expect not more than a dozen division within the next two months to come from outside to the rescue.

C-in-C West himself salvaged rather over 200,000 fighting troops from the second battle of France. Since then he has had a further 70,000 trapped in Belgium, of which many no doubt will escape, but he has gained some 50,000 additional troops from Germany, and perhaps 30,000 replacements may be acquired by degrees (a generous estimate). If 50,000 fighting troops escape from the south of France, the total troops available for manning the West Wall should eventually be around 300,000 or the equivalent of about 15 divisions, to which the speculative dozen or so from other quarters have to be added. It is most unlikely that more than the true equivalent of four panzer/panzer grenadier divisions, with 600 tanks, will ever be found.

To sum up, C-in-C West will soon have available the true equivalent of about 15 divisions, including four panzer, for the defence of the West Wall. A further five or six may straggle up in the course of the month, making a total of about 20.

The West Wall cannot be held with this amount, even when supplemented by many oddments and large amounts of flak.

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Don't forget to check the website for up to the minute cast changes.

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