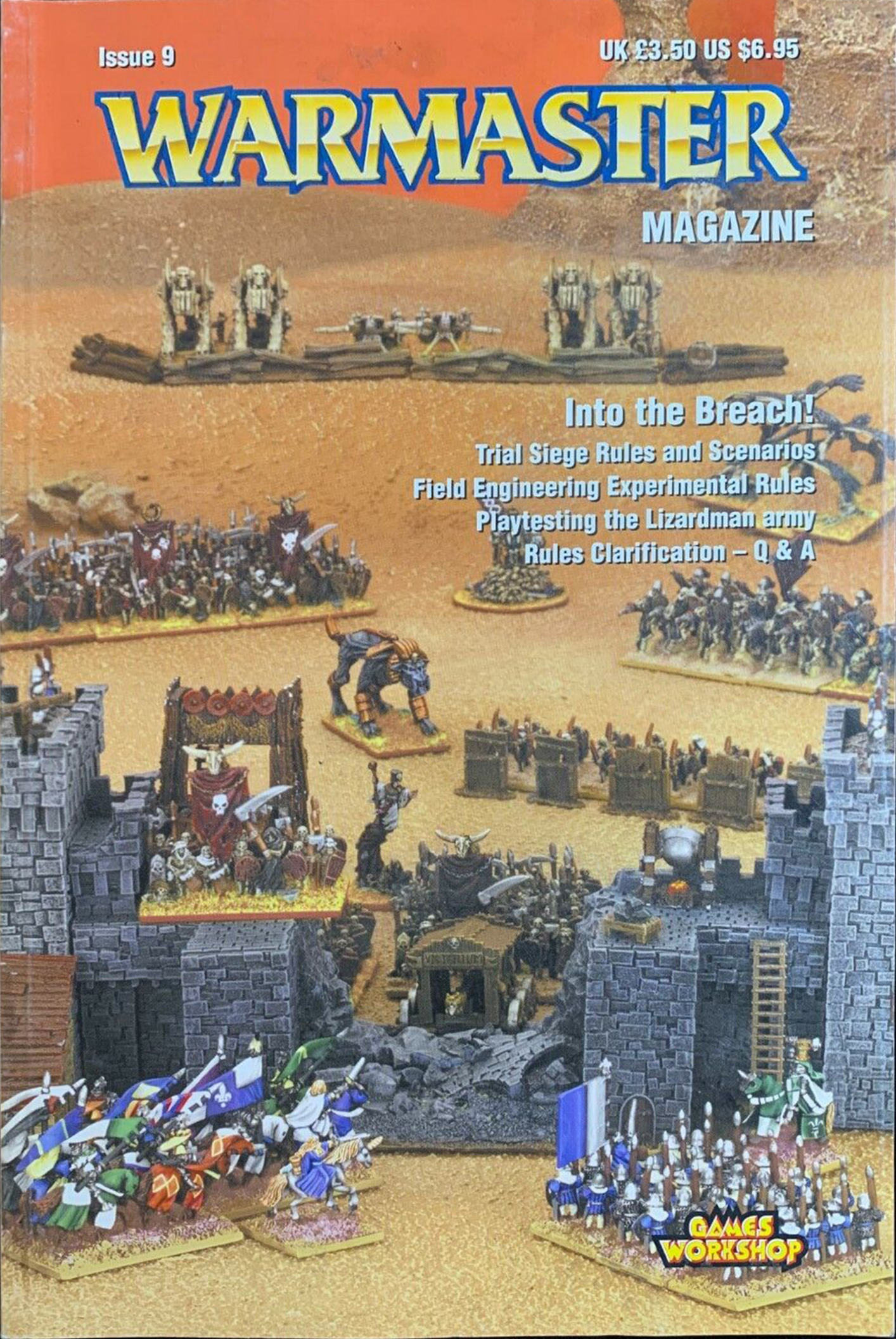
Issue 9

UK £3.50 US $6.95

WARMASTER

MAGAZINE



Into the Breach!

Trial Siege Rules and Scenarios

Field Engineering Experimental Rules

Playtesting the Lizardman army

Rules Clarification – Q & A

GAMES WORKSHOP

INTO THE BREACH!

Expanded Siege Rules & Scenarios

By David Simpson, with invaluable assistance from Chris Bobridge and Steve Hambrook

This rules expansion article deals solely with the siege rules and they are, of course, unofficial house rules. This is because, as always with unofficial house rules, they have not been fully tested to perfection as would be preferable. So if you find any holes, bugs or things that just don't work, then by all means tell us as perfection is the goal and that can only be achieved with input from the gaming public in general.

The rules are divided into three main sections. The first section contains rules designed to plug gaps in the siege rules from the Warmaster rulebook and should be treated as add-on rules or replacement rules where noted (for instance, the revised battering rules). The second section contains new rules for siege equipment. Whilst the third section offers lists of availability and cost for the different types of siege equipment and how to include them in those games.

There are also a few siege scenarios at the end of the article written by Chris Bobridge and myself. We hope at a later date to expand beyond these initial three scenarios, to develop a fully fledged siege campaign system which will include many options for both the defender and attacker. For now however, there are just these three linked scenarios which form a 'linear' campaign in themselves.

General Siege Rules

First of all regarding Break points. In all siege scenarios Break points for both armies are ignored. The game will only end when either one of the generals dies, or when the turn limit for the scenario expires. Occasionally, a scenario will state otherwise, in this instance the specific scenario rules take precedence over this.

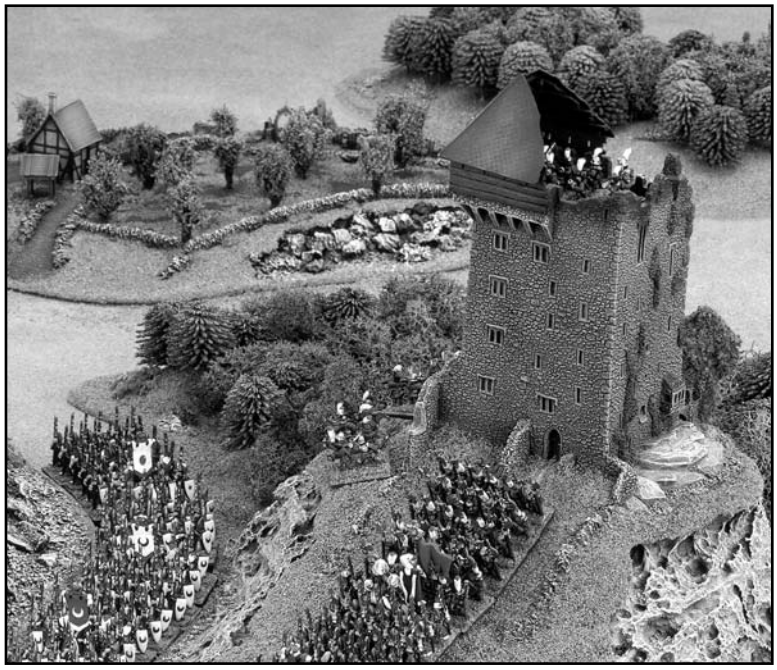
Secondly, regarding min/max levels and army points values. When deciding to play a siege game always use the attacking army as the basis for deciding how large a game you will play, then half this total for determining how many points the defender may spend on troops. For example, if the attacker has 3,000 points, then the defender has up to 1,500 points. Obviously, it is a good idea to stick to full thousands for the size of the attacking army (ie. 1,000 points, 2,000 points, 3,000 points, and so on), for simplicities sake if nothing else.

Additionally, the defending army always rounds up its max level to the next highest level of min/max if it is not a round figure. For example, a 1,000 points defending force would use the standard min/max levels for a 1,000 points army, whilst a 1,500 points or 1,250 points defending army would use the min levels for a 1000 points army, but the max levels of a 2000 points army. This represents the higher number of well trained troops, artillery and equipment that you tend to find in most fortifications. This will again always be the case in any siege scenario, unless the specific scenario rules state otherwise.

When rules refer to a wall, it is referring to a 40mm wall section. When it refers to a tower, it generally includes the entirety of the tower as defined in the Warmaster rulebook as well as the rules that follow. And, in addition, it is generally a good idea to define all gateway wall sections as towers, otherwise there would be almost no point in trying to knock the gate itself down. This however is more of a suggestion than a hard and fast rule, as it may not be appropriate for all fortification models. However, you should always make sure that both players are fully aware as to how the gateway will be treated before play starts, ie, as a tower or as a wall section.

TOWERS

The towers of a fortification are usually the most important element of any defensive structure. They are very tough to knock down and incredibly difficult to assault, whilst providing an ideal position for the defender to pour missile fire onto the attacking army. The following rules should be considered a bolt-on addition to the rules presented in the Siege rules section of the Warmaster rulebook, rather than as a complete replacement. For example, the rules for knocking down towers still stand.



An assault on a lone tower

For part of a fortification to count as a tower it must have a base area of at least 40x40mm, any less and it counts as a wall section (unless incredibly tall). Being a tower makes a structure much stronger and resilient to attack, thus a tower not only benefits from the extra damage that it can sustain over a normal wall section (as detailed in the Warmaster rulebook), but it may only ever be assaulted from either the courtyard of the fortress that it forms part of or from the ramparts of adjacent wall sections. This is because a tower is generally much too high to assault with even the longest ladders or tallest siege towers, so the only way in is through the doors that the defenders use on adjacent ramparts and in the courtyard of the fortification.

When assaulting a tower in this way only one stand may attack each facing of the tower (usually only one or two are eligible in this way). These must be from different units and the defender may also only defend with one stand per facing (although they must defend with one stand on multiple facings if there are insufficient defending stands). Defending stands never count as being flanked.

In addition to this the defending stands always count as fortified. This means that an attacking unit will only ever get the base attacks of a stand against defending units in a tower, hitting on 6s all the time. In addition to this the defender never retreats, thus there is no pursuit bonus. Likewise as with attacking a wall, there is no support.

To put it quite simply, you have to wipe out all the units in a tower before you can occupy it. A very difficult task indeed!

Free-standing lone towers only have one facing that can be attacked in this way. Whichever facing this is must be declared by the defender before the start of the battle. This facing is assumed to be the one with the door in, whether it is on ground level, high up with a removable ladder, or with some other means of assault. If this is easily visible on the model itself, then this is all the better.

The number of stands that a tower can hold is determined by its base area. This is quite straight forward, you can fit upto double the amount of stands that would otherwise fit onto the base area of the tower. For example, a 40x40mm based tower has the same base area as two stands, therefore four stands will fit into a tower of this size. This represents units not only being positioned on the roof of the tower, but all throughout its height, probably stationed at gun ports or arrow slits if they are armed with missile weapons.

Missile units in towers count as having a 360° fire arc. This means that they will all have to target the closest eligible enemy unit to the tower if they wish to fire their missile weapons.

In addition to this, all missile units in a tower may stand and fire at units that attack any facing of the tower that they occupy, The only stands that cannot do this are those that are already engaged in combat with another unit that has charged the tower. As you can see attacking an undamaged tower full of missile troops is more than slightly suicidal in most cases!

Other than this, all the normal rules regarding attacking fortifications stand. For example, if by some miracle the attacking troops do manage to wipe out all the defenders in a tower, then they do not receive any advance charge move. The only option available to them is to consolidate their position and occupy the tower.

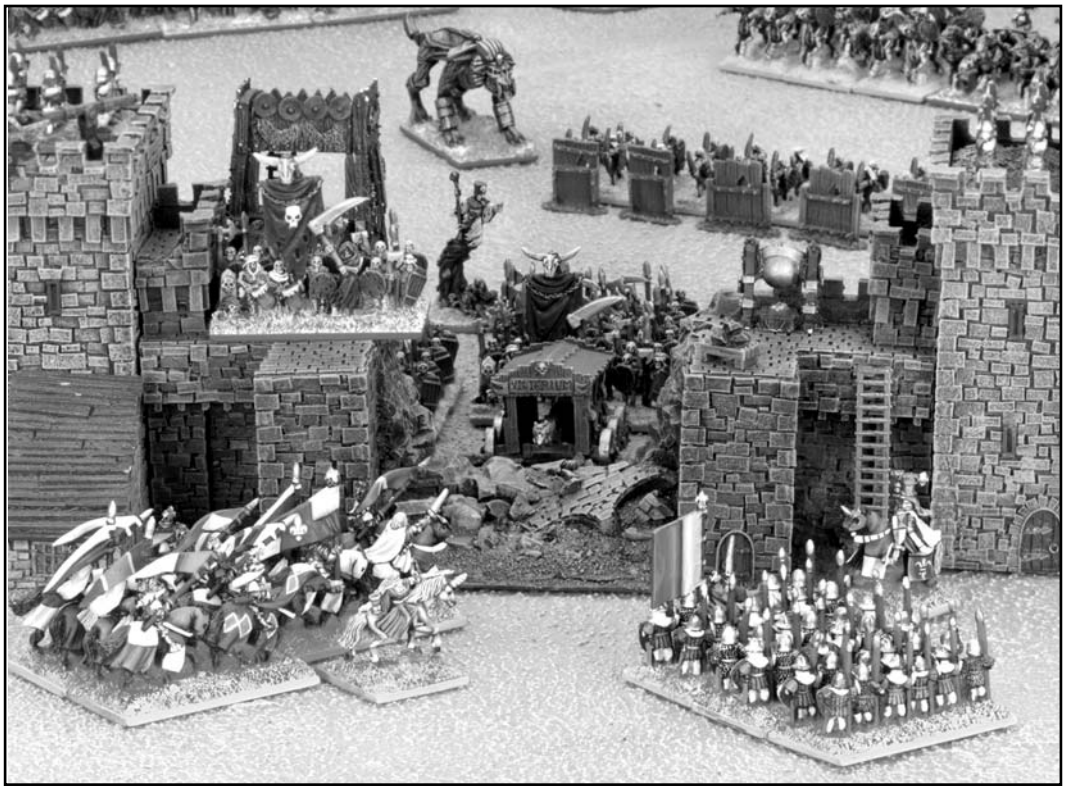
BREACHES

When a breach is caused, either by the destruction of a wall section, or that of a tower, you should remove the relevant part of the fortification that has been destroyed (if possible) and replace it with a suitable marker or model, for example, some loose sand would be ideal. The area that was previously occupied by the wall section or tower is then treated as difficult terrain. This will obviously confer a -1 Command penalty on any units that occupy the breach, but will give them the bonus of counting as being in defended terrain when charged.

This also obviously makes it impassable to anything except infantry, but line of sight can be drawn through the breach for the purposes of either missile fire or for charging through it to units on the other side. Although, as stated, the only units that can move through the breach would be infantry. The only exception is when a gateway is breached, as this is just breaking the door down and it then allows any unit to move through it as if it were permanently open (which it is, since the gate is probably lying in splinters somewhere).

In certain cases you will find that a breach caused in a wall or tower will destroy stands from a unit, possibly even destroying a stand in the middle of the unit, which would normally not be possible due to the Removing Casualties rules. Such casualties do not cause drive-backs because units stationed on the ramparts in this way expect to take casualties in this manner.

When casualties of this kind end up with a stand in the middle of their unit being destroyed then count those stands that are



Bretonnians hurry to stop the enemy at a breach in their wall

left intact as independent units until the end of the Combat phase in that turn. In the case of units with more than three stands (such as Empire units with attached skirmishers), any stands still in contact with other stands from the same unit count as a unit. In the case of a four stand unit it would give you a one stand unit and a two stand unit.

At the end of the Combat phase these 'split' units must reform just as if they had been involved in a combat. Nominate one stand to reform around and place the rest of the stands from the unit into contact with that stand. You may rotate the nominated stand if you wish, but in most instances there will be no call for this.

Empire troops assaulting a castle wall

TROOPS ON RAMPARTS

Whilst not strictly speaking a new rule to cover a hole I thought that adding something about this was appropriate. Basically, vertical distance is ignored as far as unit formation is concerned, however troops in such a formation count as being in an irregular formation.

You will find that the main reason for doing this will be to force the attacker to spread his attacks over several units, thus reducing the chances of losing whole stands. Another reason to adopt this kind of formation would be to plug gaps left in wall sections by breaches, as explained above.

BATTERING

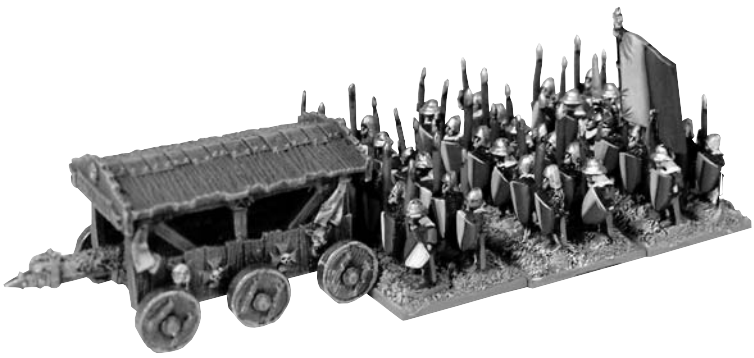
The following provides a slight modification to the battering rules and a little clarification about when you can fire artillery at walls, towers or gateways.

Firstly, you cannot fire at wall sections or towers that are in the process of either being assaulted, or battered by your troops – ie, if you have any troops on a wall section, in a tower, assaulting a wall section, assaulting a tower or battering a tower, wall section or gateway. These are effectively counted as being in hand-to-hand combat, as are any enemy units on the same wall section or tower, which does of course make them ineligible as targets for missile fire.

Regarding battering by battering rams and log rams (rules for which later on). This now counts as a first combat round for the unit that is using the battering ram in the Combat phase. Which means that if the battering manages to successfully cause a breach then this counts as destroying your enemy in the first round of combat. This will allow the unit to abandon their battering ram or log ram and make an advance charge through the breach of up to 20cm.

Another clarification is that battering cannot be done during your opponent's Combat phase. Once a turn is quite enough thank you very much! This also means that the battering units are only eligible to be shot at by conventional missile fire in the defender's turn – they can only be targeted by boiling oil attacks in the attacker's turn, just prior to the battering attempt.

In addition to this, any units with at least one stand on the wall section or tower that is being battered, may stand and fire at the battering unit instead of using boiling oil. If this causes the loss of a stand or the destruction of the battering ram, then the battering attempt is abandoned.



Infantry pushing a battering ram

To summarise, attacking a wall section, tower or gateway in any way, whether that be to assault or to batter it, effectively brings the attacking units into combat with the troops on the ramparts of the particular piece of the fortification. However, when the attacking unit is battering the fortification, the defender can only attack the battering troops (or battering ram) with S&S missile fire, or boiling oil attacks.

Units attacking units in a breach are not drawn into combat with any units on adjacent standing wall sections. The reverse is also the case, in that troops assaulting a wall section do not count as attacking troops in adjoining breaches.

This is one instance where corner-to-corner contact does not count. In addition, this means that units attacking breaches or wall sections in this way only have to spread out and maximise contact with adjacent troops that are also in a breach or on a wall section (whichever may be the case).

An example of thius would be if you have three wall sections, with an end-most section breached. Now if all the sections are occupied and a unit attacks the stand that occupies the breached section, then the stands in the attacking unit could be placed behind one another, so that only one stand makes contact. However, if the stand in the breached section is part of the unit that is also on the adjacent wall section, then the attacking unit will have to assault that wall section and maybe the wall section at the other end of the wall in question if it has sufficient movement to do so.

A unit assaulting the middle wall section, then it must also assault the other intact wall section as corner-to-corner contact does count for wall sections of the same status (ie, breached or intact). However, it would not be obliged to also attack the stand in the breached section, unless it is from the same unit as one of the stands on the wall section that has been initially assaulted.

You can if you wish attack or assault all of the wall sections in question if the charging stands have enough movement. But this is not compulsory, apart from in the sort of situations outlined above.

FLYERS ATTACKING FORTIFICATIONS

Whilst flyers may attack fortified targets in the same way as infantry, hitting on 6s and with no charge bonus. They may never occupy fortifications and thus if they win a round of combat against troops in fortifications, they may not pursue them for a second round of combat and may either stand their ground, or fall back. The defenders, however, do still have to retreat. This may cause them to abandon their defensive position anyway.

However, flyers are unique in that they are the only units that can actually attack units stationed in a tower without having to do so from the courtyard or adjoining ramparts. The normal rules for attacking towers still apply though, so the defenders will not retreat and all the missile troops will be able to stand and fire at the attacking flyers.

It does of course go without saying that when flyers try to assault fortifications, then boiling oil attacks cannot be used against them.

Archers protected by mantlets

New Siege Equipment

EARTHWORKS

These are defensive works built by both defending and attacking forces in a siege and sometimes in other situations as well. These are usually hastily constructed out of earth (hence the name earthworks), log barricades, upturned carts, barrels and generally whatever comes to hand.

In scenarios where it allows you to take earthworks the following rules are used. Each section of earthworks purchased costs 15 points and is 40mm long and 10mm wide, half the size of a standard Warmaster base.

Unless otherwise specified in a particular scenario, earthworks are always deployed before the armies set up in the relevant deployment zones, starting with the defender deploying all his earthworks first, or dice off to decide if for some reason there is no defined attacker and defender. Earthworks can be arranged together in whatever formation is desired by the purchasing player, a few examples are shown here.

Earthworks count as a linear feature that confers fortified status against missile fire for any infantry or artillery deployed directly behind them, or defended status against any close combat attacks directed against any infantry or artillery units placed directly behind them. Obviously, this only counts on the initial charge, as defended status cannot be claimed in pursuit combat.

As you may have noticed earthworks serve two functions for the defending player. First they provide a front line of defence, something to soak up some of the enemy's power before he hits the fortress walls themselves. They also provide very good 'speed bumps', slowing down and sometimes channelling the advance of siege engines such as siege towers and battering rams. However there is a way for the attacker to remove them.

To remove earthworks to make way for your siege towers and battering rams, a unit of infantry (and only infantry) must be adjacent to the earthworks at the beginning of the Combat phase and not already be engaged in combat. Then each stand in contact with an earthwork section gets its basic attacks against the earthwork (no charge bonuses, as what the troops are doing is getting their entrenching tools out). Any 6s that are rolled will destroy the earthwork that is attacked in this way. It is important that you declare exactly which earthwork sections each stand is attacking, as each 40x10mm section is effectively counted as a separate unit for these purposes.

LOG RAMS

Log rams are effectively Battering rams but without the added protection of an armoured covering to shield the battering unit. Log rams can be brought to bear much more rapidly than a Battering ram can be. The main disadvantage is, of course, the lack of protection, especially against boiling oil poured on the battering unit by troops on the ramparts above, or stand and fire from these units.

Orc mob with log ram

Attacking infantry units may be equipped with Log rams. A unit that is equipped with Log rams may only make one move per turn, although it may abandon its Log rams at any point and is then unrestricted by this. Also, when equipped with Log rams a unit may not cross or move through any terrain which is classed as difficult for movement purposes, such as forests or earthworks.

If a unit equipped with Log rams is driven back by enemy shooting or magic, then it carries its Log rams with it unless forced to enter difficult terrain.

When a unit with a Log ram makes contact with a fortress wall it will commence battering in much the same way as a Battering ram. However, if as a result of a boiling oil attack or stand and fire from units on the walls enough hits are inflicted to remove a whole stand then the battering attempt fails as per the rules for using boiling oil (treat it as if the defender had rolled a 6 on the Boiling Oil table).

LADDERS
Although in the main rulebook it states that all attacking units are assumed to be carrying sufficient ladders and grappling hooks for free here we have expanded upon this. Infantry units may only assault the walls of as fortress with a siege tower or by using ladders. It costs +5 points to equip each of the stands in a unit with ladders. Note: Units already equipped with other siege equipment, ie, siege towers, log rams, battering rams, mantlets, etc, cannot also be equipped with ladders – this means that the besieging general will have to consider where and how he will launch his wall assaults.

Siege Equipment Lists

There are two distinct siege equipment lists; the siege equipment list and the siege artillery equipment list. These lists work in the same way, but access to them is dependant upon the specific restrictions of a particular scenario. The scenario special rules will specify exactly which lists may be used by which side.

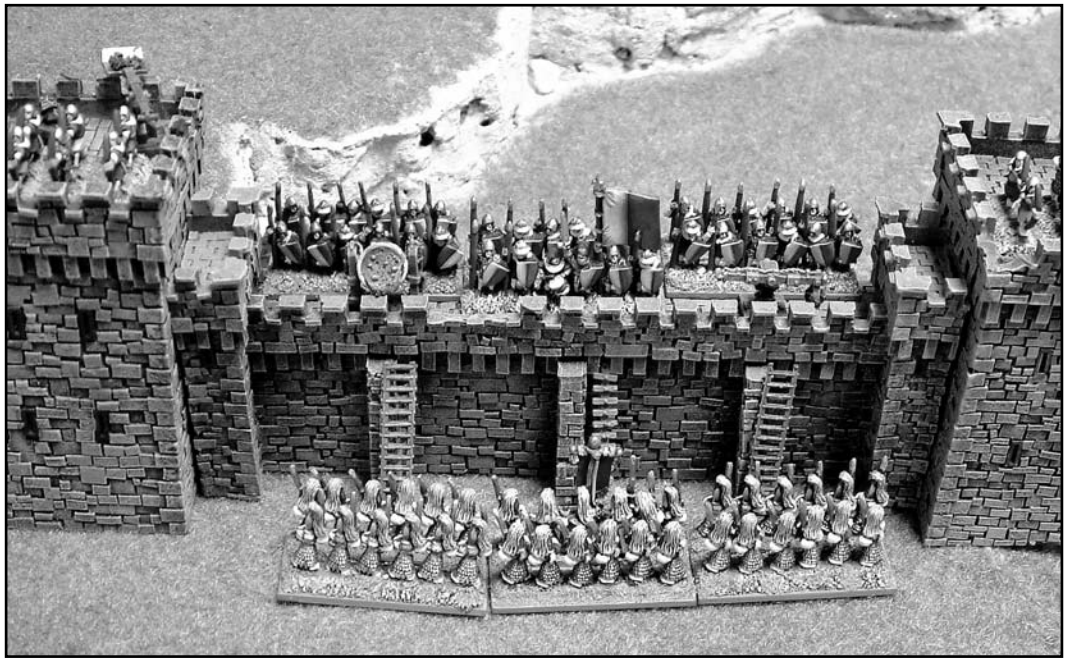
Where siege equipment is allowed, any such equipment is always purchased independently of the army list and is deployed either as a unit in the case of some siege engines or siege artillery; with an assigned unit for such things as battering rams, log rams or siege towers; onto the walls themselves such things as boiling oil; or in the deployment zones with such things as earthworks.

Unless stated specifically in the particular siege scenario that you are fighting, the amount of siege equipment available to each side will be 25% of the relevant army total, rounding up to the nearest five points. In addition to this, only half of this may be spent on the siege artillery list, if this is actually made available to that army in the scenario.

For example, a 2,000 points army is attacking in a siege game. This means that the attacker may choose up to 2,000 points from whatever army list he is using, with the standard 2 x min/max. In addition to this the player may also field up to 500 points of siege equipment chosen from whichever siege equipment lists are made available in that scenario. If this includes the siege artillery list, then only 250 points of this 500 points may be used to buy siege equipment from the siege artillery list.

Conversely, the defending forces would consist of 1,000 points of troops, chosen from whatever army list is being used, using the 1 x min/max. In addition to this there would be 250 points of siege equipment chosen from whichever siege equipment lists the scenario specifies as available to the defending army.

Exactly what siege equipment can be taken will depend on what siege equipment is



High Elves assault a Bretonnian fortress with ladders

allowed in the scenario. Earthworks are available to both the attacker and the defender, as are siege engines.

Regardless of what equipment lists are available in a particular scenario they all have to be bought out of the same siege equipment allocation for an army. So using the first example of the defending force with a 250 points siege equipment allocation, if they had access to both the earthworks and the siege defender's equipment lists then they may spend up to 250 points on either or both of these lists. The same is obviously true for attackers. The only difference will be what equipment is available and almost certainly the total points allocation, since attacking armies will almost always be larger than defending ones.

The only other rule to bear in mind when using these equipment lists is that you may never spend points from your army total on siege equipment, or for that matter spend points from the siege equipment allocation on units for your army. If you don't have enough siege equipment to use the total equipment allocation then those points are wasted.

All equipment is available to all armies of all races in Warmaster for siege battles, with the only exception being Bombards which may not be used by Elves of any kindred, or Bretonnians.

SIEGE EQUIPMENT LIST

	Type	Attack	Hits	Armour	Command	Unit Size	Points	Min/Max	Special
Earthwork	Fieldwork	–	–	Special	–	40x10mm	15	–/–	–
Boiling Oil or Rock Dropper	M	–	–	Special	–	1	5	–/–	*1
Log Rams	M	–	–	Special	–	1	5	–/–	*2
Ladders	M	–	–	Special	–	1	5	–/–	*2
Sow	M	–	3	3+	–	1	5	–/–	*2
Mantlets	M	–	–	Special	–	–	10	–/–	*2
Siege Tower	M	–	3	3+	–	1	10	–/–	*2
Battering Ram	M	–	3	3+	–	1	10	–/–	*2

SPECIAL RULES

***1 Defenders Only** – Only the defenders in a siege may use these.

***2 Attackers Only** – Only the attackers in a siege may use these.

SIEGE ARTILLERY LIST

	Type	Attack	Hits	Armour	Command	Unit Size	Points	Min/Max	Special
Mangonel	Artillery	0/4	3	0	–	1	80	–/1	
Bombard	Artillery	0/4	3	0	–	1	90	–/1	*1
Trebuchet	Artillery	0/6	4	0	–	1	120	–/1	

SPECIAL RULES

***1 Bounce** – Shots from a Bombard bounce like cannons. May not be used by Elves of any kindred, or Bretonnians.

Siege Scenarios

1. RACE FOR THE WATCH TOWER

The self-proclaimed Count Braken, leader of one of the many small princedoms of the Border Princes, owed much of his success to the chance discovery of a vast hoard of gold and gems. These riches were discovered in an old Goblin-infested, ruined fort in the foothills of the Vaults mountain range.

Since that chance discovery the Count has used his new found wealth to rebuild the fort, employing the latest (if expensive) techniques straight from Tilea. He also used his money to expand his princedom and soon trade was flourishing.

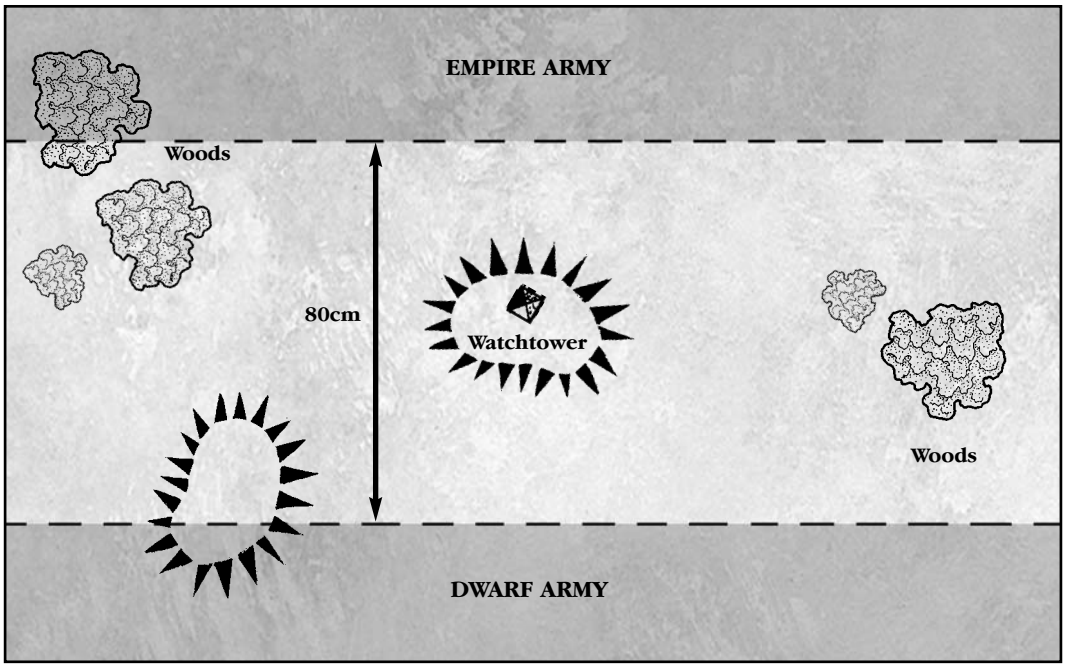
Little did the Count realise that a clan of Dwarfs living in the Vault Mountains were the descendants of those who lived in the fortress in ancient times. Soon tales of the Count's success fell upon Dwarf ears. The Count was outraged when gruff Dwarf envoys arrived at his court demanding that the riches he had liberated by handed over to them. The Dwarfs were thrown out of the Count's court empty-handed and vowing revenge. Before long the dispossessed Dwarf clan had mobilised and were marching upon the Count's castle.

When the Count heard of the Dwarfs on the march he quite sensibly sent out a scouting force. The commander of the scouts decided to occupy an old watch tower on the border of the Count's domain so that they could relay information when the Dwarf army had been spotted. When the scouts had nearly reached the old watch tower they were shocked at how quickly the Dwarfs had marched from their mountain dwelling. The race was on for the scouts to reach the watch tower in time to light the beacon and warn the Count at Braken Keep.

This battle was fought between the vanguard elements of the Dwarf army, commanded by the Dwarf Lord Grimbold and the scouting force sent out from Braken Keep under the command of Hauptman Anders.

Despite the fact that this scenario is a siege related one, none of the siege rules actually apply to it as it is not strictly speaking a siege scenario, merely the prelude to a siege. Therefore the Dwarfs have no siege equipment built yet but may assault Empire troops within the tower as described earlier.

Historically, the forces consisted of 1,000 points of Empire troops and 1,500 points of Dwarfs. However you can, of course, use any armies that you wish and any points values that you like, so long as the attacker has 50% more troops than the other.



MAP 1 – RACE FOR THE WATCH TOWER

The aim of this battle is for the Empire player to get a unit to a terrain feature in the middle of the table which represents the watch tower and hold it for an entire turn, at which point the game will end with a victory for the Empire general. To count as occupying the watch tower, there must be a unit of at least two stands inside the terrain feature throughout two consecutive player turns. What this means is that an Empire unit must enter the watch tower in one turn. Then it must remain within the watch tower throughout the entirety of the following Dwarf turn and the following Empire turn.

If the Empire army withdraws prior to this, either due to reaching its break point, or through the death of its general. Then the Dwarfs automatically win the game. If the Dwarfs withdraw through reaching their break point or the death of their general, then the Empire automatically wins.

There is no turn limit for this scenario, in addition to this Victory points are completely ignored in this scenario. The only thing that matters is who breaks first, or if the Empire army manages to hold onto the watch tower for two consecutive turns, which results in the beacon being lit and the warning to the defenders of Braken Keep being sent.

The deployment zones, table set-up and deployment of the armies are the same as for a normal battle. Both sides set up in deployment zones 80cm from each other, with the army with the most units deploying the first unit and then players alternate deploying units. Of course if you wish to set up the armies using any form of hidden set-up, this is fine.

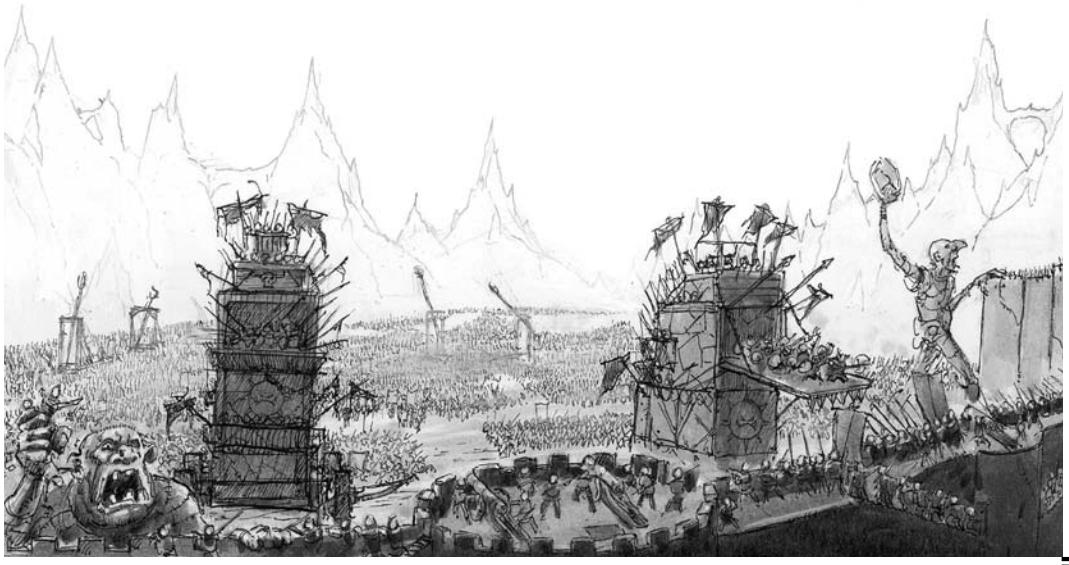
The only special thing about the table set-up in this battle is that there should be some kind of scenery piece placed in the exact centre of the battlefield to represent the watch tower. In addition, no terrain should be setup within 20cm of the watchtower, to represent the relatively clear ground that you would find around such a structure.

2. A RIDE FOR HELP

Count Braken soon became aware of the Dwarf army, either from spotting the lit beacon on the horizon days ago, or because of the large army of Dwarfs that surrounded his keep and were toiling away at building defensive earthworks. Knowing the Dwarfs' excellent reputation for conducting sieges the Count realised that he would need some help and fast! He would have to get a messenger through the Dwarf lines and request help from his neighbours.

Upon choosing a relatively weak spot in the Dwarf lines, the Count decided to send some of his bravest cavalry led by his own son, Gert Braken, for aid. They would, of course, have to burst through the Dwarf lines and run the gauntlet of missile and artillery fire to escape – not a simple task!

Despite the fact that this is a siege related scenario, it uses the normal game rules rather than the additional siege rules, with one exception.



If the Dwarfs won the previous scenario, they receive additional points to spend solely on the earthworks siege equipment list. These earthworks may be deployed within the Dwarf deployment zone prior to the setup of any troops. This ought to come to 100 points of earthworks and represents the extra time the Dwarfs would have to prepare their siege-works.

This battle is fought between the Dwarf vanguard army and a small Empire cavalry force. The Dwarf army is 1,000 points. Whilst the Empire army consists of three units of Knights and an Empire General, with no other equipment or troops available.

You can, of course, use armies other than those in the scenario. However, if you do so then the army that replaces the Empire army must consist of a General and between one and three units of cavalry, all of which must be bought out of 450 points (unless you are using a Dwarf army, in which case this must be Rangers). You may not purchase any magic items.

The table set-up and deployment are the same as for a standard battle. In other words, deploy terrain by whatever method you desire, then deploy the two armies in deployment zones 80cm apart from each other, starting with the Dwarf player deploying all of his army first, then the Empire player deploying his small force.

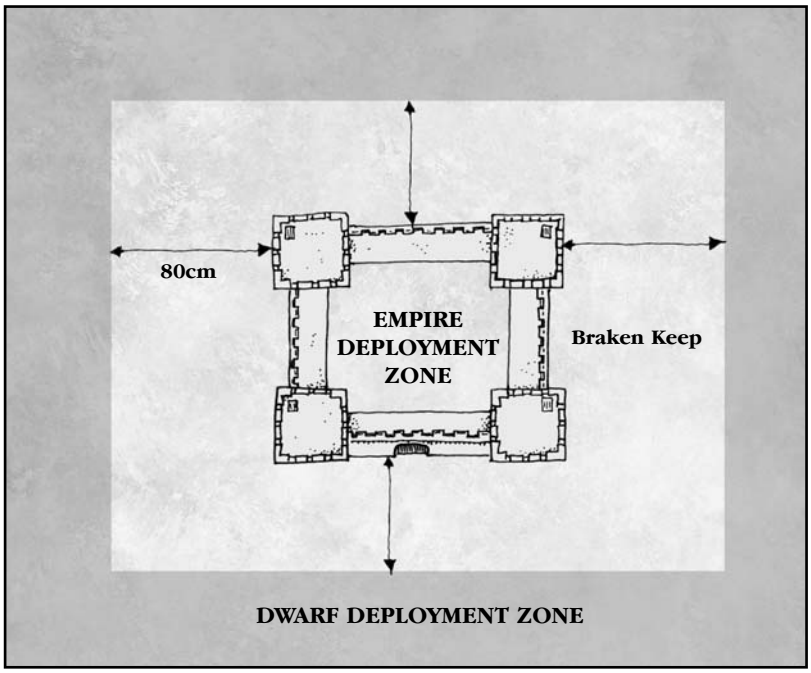
The victory conditions for the scenario are quite simple. The Empire player must get at least three stands and his general off the table via the Dwarf's table edge, or break the Dwarf army. Any other result ends up with a victory for the Dwarfs.

3. SIEGE OF BRAKEN KEEP

The Dwarf throng of Lord Grimbold had prepared their defences and after a few probing attacks to test the Keep's defenders were now in a position to mount a full scale assault. The brave men of the Empire had waited inside the castle watching the Dwarfs construct siege weapons and rams for their final assault on the castle. Count Braken was trapped inside his castle without knowing whether any help would come.

This is the final and most important attack on Braken Keep, therefore it is all or nothing. The Dwarfs will stop at nothing to capture the walls, and the men of the Empire will sell their lives dearly to defend the castle.

The most important piece of terrain on the table is of course the fortress itself, which if you have a large enough table should be placed in the centre. If not then along one of the table edges. Ideally you should have six wall sections (of 40mm length) and a tower per full 500 points of the defending army, plus the gateway. This will give you a reasonable balance between having enough walls that the defender has to be stretched a bit in holding them all and not having too much that the defender will find it impossible to mount an effective defence. Other than this set up terrain as you see fit, with the the exception that there should be no terrain within 30cm of the fortress walls. You may place a few fields, roads hedgerows and the odd isolated small building if you like, but these ought to be kept to an absolute minimum.



MAP 2 – SIEGE OF BRAKEN KEEP

This battle was fought between a Dwarf army of 2,000 points and an Empire army of 1,000 points (you can of course use different points values, but the proportion must remain the same – in siege the attacker should outnumber the defender by at least two-to-one). The battle could easily be fought between any two armies.

The two armies may choose siege equipment with a value of up to 25% of their main list. This is in addition to the armies that have been chosen as normal, as per the usual rules for siege battles as detailed elsewhere in this issue of Warmag.

The attacker may buy siege equipment from the Attacker Siege Equipment list, the Siege Machine Equipment list, the Siege Artillery list and the Earthworks list.

The defender may buy siege equipment from the Defender Siege Equipment list and the Earthworks list. Before the armies set up, place any necessary earthworks, or defender's siege equipment within the relevant deployment zones. This is done in an alternate way, starting with the defender placing his first earthwork or piece of defender equipment first (such as boiling oil, for example).

Once this has been done, the two armies are set up. First of all the defender places all of his units within his deployment zone, which all the area inside and including the fortifications and up to 15cm outside of the fortress walls.

Then, once the defender has deployed all his units, the attacker places all of his units and siege equipment within his deployment zone, which consists of all the area 60cm outside of the defender's deployment zone.

The battle starts with the attacker taking the first turn. The battle also lasts for a random number of turns, break points are ignored (however the death of a general is not).

At the end of each turn starting on Turn six, roll a D6, adding the turn number to the result. If the total is 11 or more, then the game ends immediately.

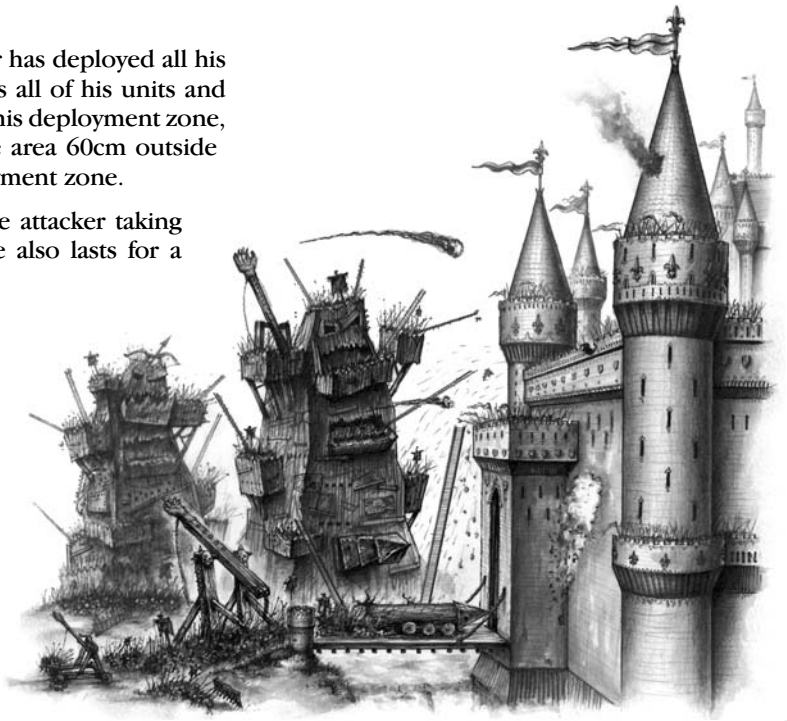
However if you played the previous scenario – A Ride for Help – this may be modified slightly. If the Empire player won this scenario, by getting the message through, then start rolling for the end of the game on Turn five instead of Turn six, as the reinforcements to lift the siege will arrive sooner.

The winner is determined by using Victory points, but do not count Victory points for casualties. Rather, allocate Victory points for controlled sections of the castle, as shown below.

Section	Points
Wall	50
Tower	150
Gateway	100
Courtyard	200

Control of each section is determined by who has the greatest number of stands in the area. If the number is equal, no Victory points are allocated for that section.

Destroyed walls, towers and gateways earn no Victory points for either side. In addition to this if an army general dies before or on Turn six, then that side automatically loses. If a general dies after Turn six, then use the Victory Points table above and ignore casualties for victory calculation. Whichever side has more Victory points is deemed to have won, there are no draws in a siege.



DIGGING FOR VICTORY

Field Engineering Rules

by Wayne Rozier

In nearly all eras of warfare the weapon of choice for the smarter soldier has been the entrenching tool – or variant: pick, shovel, axe, etc. Just to name a few – Ancient Greeks (see Thucydided), Romans (Caesar), Han – Ming Chinese, 100 years War, 1776, Napoleonic, ACW, Crimea, WWI and WWII, Korea, Nam, etc. Across the ages the grunt has always known to dig first and shoot later. Warmaster has yet to give us specific engineer troops or engineering rules for our infantry units. This article attempts to correct this and allow generals to command units to dig-in or prepare static defences.

Fullscale fortifications take a long time to fabricate and erect. They were either fashioned at home and transported to the chosen sites, then erected by skilled artisans. Or more often they were built from local stone, timber or earth. This is not a battlefield activity and as such does not qualify as battlefield engineering. The use of mobile forts is excellently covered in the Kislev list and is costed as a unit. It should be recognised that any fortress rules should have a point system associated to it. Currently we have points for pre-purchased items – siege towers, rams, mantlets, mangonels, etc. But we don't have a way of producing them on-site or costing the addition of an ability to make items on a battlefield. I've introduced in these experimental rules new kinds of field works and some rules governing their construction on the battlefield and effects. There is no reason why a game cannot begin with some of these constructs already in place for one or both sides as long as it fits the scenario.

Carrying or Porting

A unit cannot carry more than one kind of device and a stand can only carry one thing. So, a unit can only be armed with mantlets or stakes or caltrops or a Sow or a Ram or a Tower or lumber, etc. Never a combination.

WAGONS

Wagons can carry up to three items in a mixed load per wagon – players need to agree but three items per wagon looks okay to me. Wagons move as chariots (30cm and can't cross linear obstacles) but can only be issued one command per turn. A wagon can load and move in one turn or unload and then move. Once a wagon moves it cannot load or unload until the next turn. To reflect the universal obstinate nature of wagon drivers, loading or unloading can only occur after a successful move command and as stated is the first thing the wagon unit does before moving.

Wagons driven back by shooting do not drop their loads. They are deployed in units of three wagon stands. They cannot be ordered to charge – they will not pursue or advance into fresh enemy. They must use Initiative to evade and will not load or unload before evading. They count toward enemy Victory points but as they are non-combatants they do not count toward the break point.

Empire Wagons

WM9_16_23 8/13/04 11:18 AM Page 17

A wagon unit can be ordered to convert itself into a barricade. This takes one turn as the drivers push their wagons over in their current position and then leg it home. Replace each wagon stand with a barricade section, and award the opponent with 20 Victory points.

Victory Points

Unless stated in the stats for a fortification type, the destruction of a facility only gives Victory points to the enemy if the players have agreed as part of the scenario. I suggest that these are awarded on the basis of the points cost given in the list.

Field Engineering Works

BARRICADES

These are rapidly erected obstacles made from whatever material there is to hand. Making barricades requires that there are some loose items readily available. Any infantry or artillery unit can erect a barricade.

The unit must be adjacent to a village or a stockpile of cut wood or loose stone (ie, next to rocky terrain). Upon successfully receiving the 'build barricade' command each stand in the unit erects one 4cm long 1cm deep linear obstacle.

A barricade confers cover on any unit immediately behind it as if it were a hedge or wall. The unit has the status of defended for both mêlée and shooting. Essentially, a wall has been erected. It is less sturdy than a properly built wall or an ancient hedge and as such should have 50% less hits when being targeted by artillery.

Pre-battle a 12cm barricade costs 5 pts. deployed before troops set up.

STAKES

These are nasty pointy sturdy poles of wood about 6' long – deployed by bashing them into the ground, pointing toward the enemy. Generally, each man in a unit carries a stake. So a 10 man deep 50 man wide unit would deploy 500 stakes – 10 deep by 50 paces wide in the time it takes two men to hammer in two stakes (one holding, one hitting). Pretty quick really!

Not usually made on the battlefield – but it's possible. On command each stand in the unit can convert one Lumber token into one Stake token (see palisades for rules on chopping wood). Pre-battle stakes cost 5pts per stake stand. A foot unit can carry one un-deployed stake stand per element. Represented as a piece of cocktail stick when being ported and as a 4x2cm stand with sharp points when deployed (cocktail sticks are too massive for Warmaster scale, needles are OK but are hard to fashion – straightened and cut to size brass paper clips are best – they do less damage to the unwary hand – oweee!).

Stakes are allowed for most infantry troops but not Goblins, Bretonnian Peasants, Skinks, Trolls, Ogres, Skeletons, Wood Elves or troops that do not suffer drive backs from shooting. These are deemed too weak, stupid, moral, or aggressive to use stakes. If Warmaster ever introduces pike armed troops then I suggest these too are not allowed to carry stakes. In fact pike armed troops can't carry anything else except their pikes.

On a successful 'deploy' command a unit in line formation carrying stakes retires 2cm and places a line of stake stands in the vacated gap. On a successful command 'remove' a unit adjacent to and behind the

WM9_16_23 8/13/04 11:18 AM Page 18

Archers deploy behind some stakes

stakes removes the stake stands, shouldering or discarding the stakes, and occupies the gap created. Neither of these manoeuvres can be executed when in contact with the enemy or can result in contact with the enemy, nor can they be done on Initiative. An order must be given – troops carrying slung stakes can be given multiple commands in a turn (eg, – remove stakes, move, deploy stakes). Of course, the -1 Command modifier for each successive order applies. Troops in mêlée carrying stakes drop them, moreover if they charge, are pushed back, pursue, advance or move from where the stakes were dropped, for whatever reason, then the undeployed stakes are lost.

Effect of deployed stakes. Chariots and Wagons, Artillery and Siege towers cannot cross stakes, they should treat them as impassable terrain. The Empire Steam tank and Sows are unaffected by stakes – in fact they destroy any stand of stakes that they move across. Flyers can land in stakes but will suffer shooting attacks as normal – they will also suffer when they move out of the stakes.

Once deployed a stand of stakes has a front and back edge along its long sides. Troops at the back count as defended and gain a non-open advantage to chargers. Cavalry, infantry and monster stands that cross stakes from any side except the back suffer a normal shooting attack (roll drive back but don't move the troops; on a 6 the unit is confused).

If during a mêlée troops pursue across stakes not from the back then they suffer the same shooting attack, if troops are pushed back across the stakes (from front to back) then they too suffer shooting from the stakes. Remember, each troop stand suffers a shooting attack for each stake stand they partially or wholly move across.

Troops behind the stakes do not count as in cover when being shot at but count as defended and so roll one less Driveback dice. Once stakes are deployed they remain in place until a 'Remove' order or they are destroyed by artillery.

Stakes cannot be deployed in dense terrain, on rocky ground, roads, bridges, marshes, swamps, rivers. They can be deployed on open ground, hills, etc.

CALTROPS

These are nasty spiky balls that can be thrown out or deployed in front of troops. They cannot be made on the battlefield, cannot be retrieved and can only be used by non-missile armed infantry.

They may be used once – on command 'Deploy' or when charged. On use deploy a 4x2cm stand of caltrops for each stand in the unit adjacent to each deploying stand in any alignment. All stands must deploy or non deploy.

Every whole or partial stand of caltrops crossed or partially crossed by any infantry, cavalry, chariot or monster stand causes a

Infantry behind a log barricade

WM9_16_23 8/13/04 11:18 AM Page 19

shooting attack on that stand. They do not affect flyers or machines and do not discriminate between friend or foe.

Troops adjacent to caltrops at the start of their turn can be ordered to clear the caltrops (this is not retrieval). Whilst caltrops were re-used around forts and fixed defences in battlefield terms not all could be recovered and in fortress terms they would go back into the baggage train.

Troops carrying caltrops are indicated by placing small spiky things on or behind each stand. There is no movement or command limitation placed on troops carrying these devices. Moreover troops do not discard them on excessive drivebacks, nor are troops required to drop them in order to engage the enemy.

PLASHING

This is the weaving of branches into a wooden wall around or near a wood. Really it's a Wood Elf trick but is also available to Kislev Axemen, Bretonnian Peasants, Goblins and Skinks. Bigger greenskins wouldn't demean themselves! Normally this is made on the spot and not transported to a battlefield – however armies could buy these as battlefield emplacements or camp walls before deployment.

Plashing cannot be bought deployed and those wishing to make it must be within 12cm of a wood or forest or dense brush. Not orchards, as there is not enough loose wood about.

A unit within or touching a wood or similar terrain (see above) can be given a command to 'make plashing' (only one stand needs to be touching the wood). It takes the following successful orders:

1. Gather Wood – Place one twig (hint – Use real twigs) behind each stand in the unit – Wood Elves skip this phase on move straight to Turn 2.

2. Fashion Plashing – Place face down wooden walls (one per stand).

3. Emplace – Erect one stand per stand of infantry fashioning the wall. This can be up to 12cm away from the wood and is adjacent to at least one stand of the deploying unit – Note each stand of the unit does not have to be adjacent to the deployed plashing.

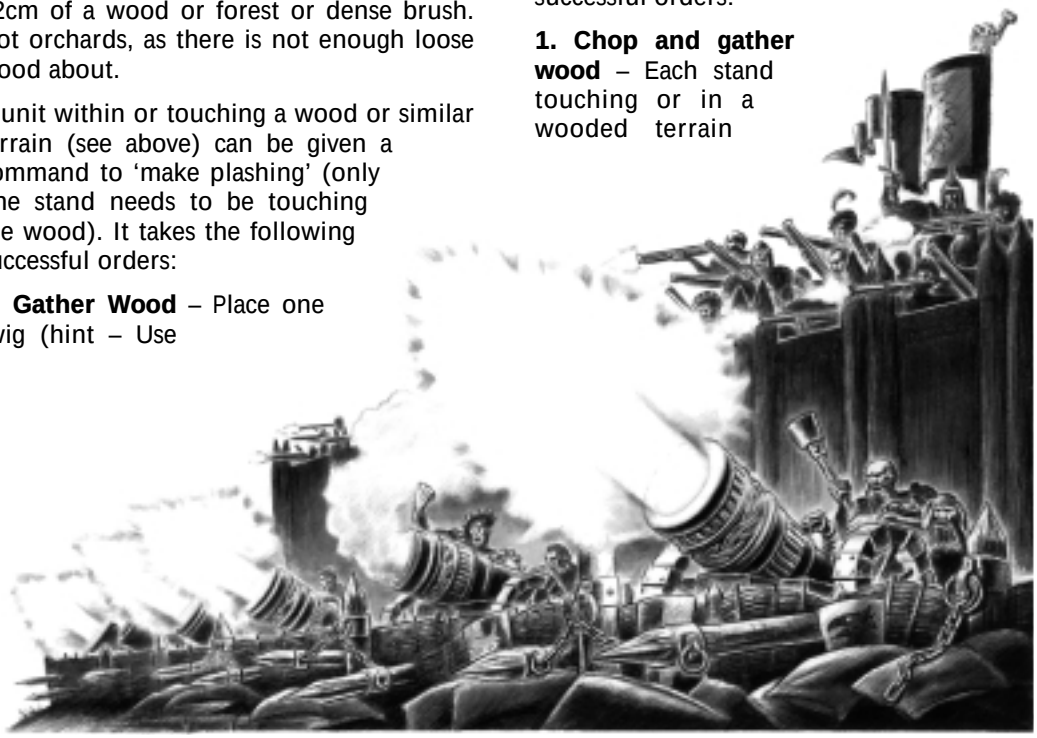
Plashings make a linear obstacle and give a cover benefit and a defended status to the troops behind them. If the plashing is around the wood then troops in the wood and behind the plashing now count as fortified against mêlée and non-artillery missiles.

PALISADES

These are really strong wooden walls usually erected behind a ditch and stakes. Often requires prefabrication – 20 pts per deployed (includes ditch) or 10 pts per undeployed stand. Fabrication on the battlefield is possible but difficult . Can only be made by infantry. Cannot be done by Goblins (too weak), Skeletons (not skilled) or Trolls (too stupid).

This requires a number of successful orders:

1. Chop and gather wood – Each stand touching or in a wooded terrain



WM9_16_23 8/13/04 11:18 AM Page 20

feature rolls a D6 and on a 4+ wood is chopped. Place a match with the unit (note this is not the same as gathering loose branches for plashing).

2. Move Wood – Units can carry one pile of wood (match) per stand. Wood can be moved and stock piled in a location where it can then be fashioned into a palisade. A unit carrying wood can only be issued a single command that turn. Wagons or baggage units can also transport wood and other things – I suggest six items per stand.

3. Build Palisade – Infantry units can 'attack' the wood with their basic attacks requiring a 4+ to make a stand of unerected palisade (yeah, I know it looks a bit quick but it isn't really).

4. Erect – An infantry unit can erect a palisade section (or dismantle an erected section if that's the order). No dice required, just a successful command.

A stand of infantry can carry one section of dismantled palisade and only move 15cm per turn whilst carrying the palisade. Only one command may be issued per turn The unit cannot fight and act as porters – the palisade will be dropped if engaged in combat. If driven back from shooting the unit will drop the palisade section. Discarded palisades can be recovered by moving on to them or destroyed if the enemy moves onto them.

Erected palisades counts as hard cover and fortified against shooting attacks (+6 to hit - 2 Drive back dice). In mêlée they confer defended status and soft cover to the defenders (+5 to hit, not in open). If, however, the palisade section is placed at the top of a mound made by a ditch or on a hill then troops behind the palisade and uphill to enemy count as fortified in mêlée.

Really paranoid generals deploy stakes on the ditches and/or caltrops in front of any gates. For troops to enter/ leave a palisaded fort at least one non-ditched opening or barricade must be included in the configuration.

TRENCHES, DITCHES AND OTHER EARTHWORKS

Bastions and Redoubts: We're not talking about deep networks of trench systems as in WWI but buttressed redoubts and protective cover made from earth, wood, etc.

Ditches: Each infantry unit ordered to dig can fashion a 4cm length of ditch on a 4+. Roll one dice per stand. Each ditch section is placed under the unit. A single ditch is a 4x4cm stand, with a 4x2cm depression with 1cm to 2cm of mound at the front and back of the stand. A ditch confers uphill advantage to those behind it (on the uphill section) and negates the charging enemy the 'in the open' bonus. Ditches are not linear obstacles to chariots, however they are obstacles to covered rams, sows, siege towers, steam tanks and other machines. A unit in a ditch does not have a defended bonus in mêlée or cover from shooting – moreover they are still classified as in the open (downhill from any enemy chargers).

Ditches cannot be dug in soft sand, bog, marsh, wood, villages, rocky ground, ruins, rivers, etc. Only on open ground or hills. In following turns a ditch can be converted to a trench or redoubt.

Trench: Each infantry unit ordered to dig a trench may convert a ditch into a trench on the roll of a 4+ (one roll per stand). Each stand in a ditch can replace it with a trench stand. This confers fortified status against shooting for troops in the trench but a worse than open status in mêlée. There is no

WM9_16_23 8/13/04 11:18 AM Page 21

charge bonus against troops in a trench but they are hit on a +3 rather than a +4. Trenches are linear obstacles. I regard the trench as an optional rule – used in sieges to get close to the enemy without being shot at. But not sure about its use in Warmaster.

Empire Redoubt/Bastion

Redoubts: A ditch can be converted to a redoubt on the roll of a +5 (in the same manner as making a trench). This makes a 4cm long mound or wall of braced earth to the front of the ditch. Troops count as defended and in cover to both shooting and mêlée across this mound – other mounds behind and to the side can also be added on further rolls. To dig ditches and make earth defences takes a command and troops doing this cannot be given any other commands in that turn. Artillery can occupy ditches and redoubts.

Bastions: A redoubt can be converted into a bastion by the addition of chopped wood (see palisades) or quarried stone. Just issue the order and each infantry stand of the unit can convert one section of redoubt to bastion by the consumption of one Lumber token (a match!). They must be in possession or adjacent to a wood stock pile. A bastion gives fortified status to the troops within it.

Pre-battle costs for ditches, trenches, redoubts and bastions can be found at the end of this article

TUNNELS?

I like the idea of engineering tunnels – to go under walls but it is a very hard thing to do without maps. Any ideas?

FALAISE BUNDLES

Ways of filling ditches, trenches and moats so wheeled stuff can cross and any defended status is negated.

Infantry adjacent to or within woods can gather wood and make bundles for filling trenches. It takes one successful command to do so. Each stand can carry enough bundles (put a match next to the stand) to fill one section of ditch, trench or dry moat. Carrying bundles is awkward, only one command is allowed per turn but full movement is allowed. Bundles must be dropped if the unit is engaged in combat and will be lost if the unit moves from its position during the mêlée. If the unit charges any enemy they are automatically discarded and lost when the charge is declared. A unit carrying bundles cannot carry anything else – ie, stakes, wood, etc.

Filling a ditch or trench occurs during the Shooting phase of a turn and the unit must be adjacent to the trench – moreover the trench or ditch cannot be occupied, as that would cause a mêlée. Each stand removes its load of bundles and rolls a D6. On a 4+ a 40mm section is filled (fill the ditch) otherwise the bundles fail to fill the ditch section. Trenches require a 5+ to fill and dry moats require a 6+.

Only infantry can make and deploy bundles. Bundles for a whole unit (one per stand) no matter how many stands, costs 5 points if pre-purchased.

OPEN PITS

Nasty anti-cavalry and chariot obstacles: Easy to do and easy for the enemy to spot and avoid. Pits cannot be dug in soft sand, bog, marsh, wood, villages, rocky ground, ruins, rivers, etc. They can only be dug in open ground or hills – useful to protect you from troops higher up the hill.

Any infantry with an armour save of 5+ or worse may dig pits. Issue a command, out comes the entrenching tool and they start digging! Each stand rolls to hit on a 3+. Place a Pit marker in the troop stand's position and move the troop stand away – of

WM9_16_23 8/13/04 11:18 AM Page 22

course this will possibly unform the unit for a turn. Troops digging pits need to be commanded to do so each turn and can only be given one command per turn. Infantry behind pits negate the 'charging in the open' bonus when being charged. They do not count as being in a defended position.

Pre-dug pits costs 5 pts and must be placed before troop deployment.

TRAPS

These are harder to make than pits and harder for the enemy to spot. Only light infantry (no save) or specialist troops (insurgents or engineers) can do this. Such troops include Dwarf Rangers, Elf Shadow Warriors ('not in the list gov!') and when looking at other troops you reckon on Night Goblins for sure (nasty things), Kislev Axemen (occupational), Empire skirmishers, Peasants for sure, Skeleton Bowmen I allow, I'll also add in Harpies for Chaos, and Skinks (nasty poison darts) for the Lizardmen. We'll have to wait to see the Dark Elf, Wood Elf, and Skaven lists but they should all have a unit type that can do this. Essentially, only the High Elves are without Trap makers in their army list – perhaps artillerymen should be considered for this duty. What do you all think?

As with pits, making traps requires an order but this can be done on any terrain type – including sand and bogs. Declare how many stands will attempt to make them (Goblins and Skinks must use all in the unit). Each stand rolls a D6 one at a time. On a 6 they place a covered pit or other Trap marker and move the successful troop stand away. Any 1s rolled causes any adjacent traps to spring and hit the deploying unit – see below.

Troops behind traps negate the 'charging in the open' modifier only if they are infantry and the enemy actually springs some of the traps. Each trap stand touched by each enemy stand or crossed by any unit (friend or foe) is sprung on a 4+ (remove the trap as soon as it is sprung). The trap does three normal hits to any unit except machines. Continue rolling to spring the traps until all enemy have tested or all the traps have been sprung. Any troops suffering hits from a trap (including setters that spring their own traps) roll for, but do not suffer, drivebacks – due to the heinous nature of the traps they become confused on a 4+.

Flyers that do not land on traps or land next to a trap are immune to their effect. Machines can trigger traps but do not suffer the hit. So get that Steam Tank on mine clearing detail.

Traps cost 15 pts per stand and must be placed before deployment.

Optional rule: For each trap made place three stands – two are dummies and one is real. Mark on the underside which is which. Dummies are removed when sprung and no injury result from them. If playing this optional rule then each set (two dummies, one real trap), costs 20 pts.

Signals Troops

Normally a signals unit is required to establish order relay and Command points. In Warmaster game terms this infrastructure is manifested as a General, Hero or other figure with a command rating. Yet it is small enough not to be targeted. In reality many ancient armies possessed a much larger signalling and command infrastructure that went beyond an officer's immediate entourage.

Signals Tower

Signals troops are purchased before the battle. They are represented as a single stand unit. If a signals stand is within 20cm of a commander issuing an order then the Command distance is considered as 20cm less than the actual distance, measured from the commander to the target unit. The effect is to give a +20cm command range and reduce the distance penalty by -20cm. The disadvantage is that the signals unit can be targeted and it needs to be given orders to move – orders to a signals unit always receives a +1 bonus (max is always 10).

Signal units are a stand of the cheapest

WM9_16_23 8/13/04 11:18 AM Page 23

infantry or cavalry unit available to the army and have their stats. All armies can buy signals – this can be represented as drummers, runners, riders, flag wavers, bell ringers and other musicians, scrying Wizards, etc.

Signal towers, stations, etc
Signals troops can be given orders to erect signal posts. A signals unit can erect one post per turn. Roll a D6. On a 3+ the post is created. If they are erecting posts they cannot be given any other commands nor can they assist officers in giving orders – they are too preoccupied with erecting the station. A signal station affords +1 to a single command per turn to any unit within 60cm of the post. Signal stations must be 20cm apart for this benefit – a signal station within 20cm of another one cannot award a +1 benefit if the other station has already used this facility this turn. Once erected a signal station cannot be moved, however any unit adjacent to the station can be ordered to dismantle it by mêlée. It is destroyed if it loses a mêlée or takes three shooting hits in one turn – it does not suffer drivebacks. It is never included as a unit in a complex mêlée. It is a staffed building or post that can be destroyed.

Lost posts do not count toward break points and an erected post does not increase the army break point. However, lost posts do count toward Victory points. All armies can have signal towers, way stations, banners, beacons, magical totems, etc.

Engineers

Whilst I have not included rules for specialised engineers it is possible for generals to add these to their order of battle for certain scenarios. I recommend that you base them on a basic troop type and then move their stats about. Reducing armour looks sensible, as they have to perform heavy duty work. You can't dig in full plate and shield!

Now give them a +1 on all the Digging and Building rolls covered in these rules. I'd allow 1 unit per 1,000pts (or should that be +1 per 2,000pts?).

This article introduces a whole set of new engineering skills and features – players should agree on which rules are in or out of their games and maybe work up some specific scenarios to use these rules in.

ENGINEERS & ENGINEERING WORKS

	Type	Attack	Hits	Armour	Command	Unit Size	Points per Unit	Min/Max	Special
Wagons	Wagon	1	3	6+	–	3	20	–/1	–
Signals	As cheapest unit in army (cav or inf)*					1	*x2	–/1	–
Engineers	As cheapest inf unit in army, -1 Armour*					1	*x2	–/1	–
Barricade	Fieldwork	0	3	0	–	12cm	5	–/–	–
Plashing	Fieldwork	0	3	5+	–	4cm	5	–/–	–
Stakes	Fieldwork	1	3	4+	–	4x2cm	5	–/–	–
Palisade	Fieldwork	0	6	5+	–	12cm	20/10	–/–	–
Ditch	Fieldwork	0	0	0	–	12cm	10	–/–	–
Redoubt	Fieldwork	0	8	4+	–	4cm	20	–/–	–
Bastion	Fieldwork	0	10	4+	–	4cm	40	–/–	–
Caltrops	Fieldwork	1	–	–	–	4x2cm	10	–/6	–
falaise	Fieldwork	0	0	0	–	3	5	–/–	–
Pit	Fieldwork	0	0	0	–	3	5	–/–	–
Traps	Fieldwork	0	0	0	–	3	15	–/–	–
Signals post	Fieldwork	0	3	4+	–	1	20	–/1	–

WARMAG

THE ESSENTIAL WARMASTER SUPPLEMENT...

- *Into the Breach! – trial rules for siege, plus scenarios.*
- *Experimental field engineering rules.*
- *Playtesting the new Lizardman army.*
- *Collecting and painting a Bretonnian army.*
- *Warmaster at Games Day 2001.*
- *Battle Honours – where to find every Warmaster article.*
- *Warmaster Hordes – the full range of Warmaster miniatures.*

Warmaster Bretonnians painted by Gene Cochran & designed by Dave Andrews

5 011921 949694 >

FANATIC

Fanatic Games,
Games Workshop Ltd,
Willow Road,
Nottingham,
NG7 2WS, UK
www.fanatic-games.com

GAMES WORKSHOP

Citadel and the Citadel Castle, Games Workshop, Games Workshop logo, Warhammer, Warhammer 40,000, Fanatic, Fanatic Logo, Black Library, Black Library logo and Warmaster are trademarks of Games Workshop Ltd.The copyright in the contents of this package is the exclusive property of Games Workshop Ltd © 2002. All rights reserved.

PRODUCT CODE
60 71 12 99 009