# BOMBER!

## BOMBER!

An educational game designed to promote discussion about military bombing, asymmetric warfare, political ideals, deception and ethical/humanitarian behaviour.

## Outline

This game is designed to be played with small groups of students, preferably 3 per side in each group, as a classroom activity taking no more than 45 minutes, followed by a post-game discussion taking another 45 minutes. The game itself is relatively simple and is based on a modified version of the children's game "Battleships"[1] so should be easily accessible to students.

The briefs are intended to be printed double-sided. Each team should be provided with a set of the rules for each player (relevant for their side in the game) and two copies of the game map sheets. Spare sheets should be kept on-hand for mistakes during set-up. Please note that the game is asymmetric and the rules are different for the two sides.

## Conducting the Game

The players should read their Outline briefs and be warned that all the information they will need for play is contained in the brief. The players should be allocated roles: The Political Leader, the Military Commander and his Intelligence Analyst.

The players should then plan their strategic deployment of their military infrastructure and the laydown of the civil infrastructure and heritage sites on the game map sheets. It is important that players use permanent felt pens on paper maps and only be allowed to correct errors in the numbers of squares allocated to each element, and not change the locations of the elements and their relative positions, as we would wish to examine this as part of the learning outcomes.

Provide the Redlandians 16 counters, 8 each in 2 different colours to represent the Ballistic Missiles and Freedom Fighters that they start the game with. Carry spares of the Freedom Fighter coloured counters because quite often the Freedonians will carpet bomb the Redlandian capital and generate a lot of additional Freedom Fighters.

The players then take it in turns, starting with Redlandia, to call out a location on the map at which they wish to carry out an action (bombing, recce, etc.). The other team must truthfully report back what is at the location and what happened to it. If a dice roll is required, you should let the players roll the dice as this generates more engagement in the student teams.

If players have questions on the rules, such as "what happens if I hit the hospital?", you should simply repeat that all they need to know is contained in the rules. You will need to use your common sense, but most questions can be answered by looking at the rules and not making wild assumptions. It is quite common for the Freedonians to note that there isn't anything in their rules to stop them bombing civilian Infrastructure and occasionally they will ask about this – again, it is important to tell them that "all they need to know is contained in the rules" because it is a learning point in the post-game discussion to point out that the two side are playing to different sets of rules so what seems ok according to their values, may generate unfortunate consequences when considered from the viewpoint of another culture and belief system.

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[1] https://en.wikipedia.org/wiki/Battleship_(game)

The first team to have their Military Infrastructure destroyed loses the game – but if the Redlandians are defeated and still have Freedom Fighters left, they can still use them to attack the Freedonians, so it is possible for them to destroy the remaining Freedonian Military Infrastructure and end up with both sides being defeated.

## Post-Game Discussion

The game is specifically designed to be biased against the Freedonians (even though it is perfectly possible for them to win) and it is not necessary to play the game to the bitter end, particularly if they are losing and complaining about the game being unfair. If you end the game slightly early you can avoid the occasionally wildly competitive player getting upset because they lost or becoming insufferably obnoxious because they won.

The first question to ask the players is "**What did you think of the game?**". Encourage criticism by picking out the first negative comment and asking for an explanation. Provided that the player can provide a coherent reason, write this on the board and ask "**What else is wrong with the game?**" and make a list.

You should then ask "**How could you make the game better?**" and look at game mechanisms that change play, noting these ideas alongside the comments.

You should get quite a few comments beyond the obvious "the game is unfair", such as "**the Freedonians should be able to get better intelligence with drones, rather than only be able to look at one location at a time**". This is a very useful comment as an example because drones are notorious for being able to look extremely closely at a location without any context and wider situational understanding: "Looking through the Predator's camera is somewhat like looking through a soda straw[2]". It can then be argued that the Redlandians should have better intelligence on Freedonian locations because of the Press as well as freely available information on the Internet and social media in Western nations.

## Possible Points for Discussion:

- **The need for planning**.  Rushing into laying out the military and civilian infrastructure rarely produces and optimal lay-down, so thinking about the problem first is likely to produce better results.
- **Understanding capabilities**.  The range of the Ballistic Missiles owned by the Redlandians prevents them from being able to hit target in Row A. The probabilities of hitting a target with Iron Bombs is very dependent on the direction they are dropped from. These are significant facts that the players should have noted. Reading the brief and understanding military capabilities strengths and limitations is essential for military planning.
- **The value of intelligence and process**.  It is very easy for the player's to "lose their place" and get confused unless they use both of their map sheets carefully: one to record damage to their infrastructure and the other to plot the locations in the enemy capital, make intelligent estimates as to likely locations and record damage to the enemy infrastructure.
- **A thinking enemy**.  The fact that a weapon system has a limitation might lead a player to lay down their infrastructure to exploit this: for example, they might put a number of parts of their military infrastructure along Row A to protect them. Of course a thinking enemy could suspect that their enemy might do this, and therefore deliberately strike multiple locations on Row A with his Freedom Fighters in the first move, dealing a significant blow to their enemy. Considering the problem from your enemy's point of view is always useful.
- **Ethical behaviour**.  It is common for the Freedonians to assume that the Redlandians will deploy their Military Infrastructure sandwiched between their Civil Infrastructure in order to exploit the possibility of the Freedonians missing the target and hitting their Civil Infrastructure (thereby generating more Freedom Fighters). It is equally common for the Freedonians to have done the same thing, or placed Military Infrastructure along Row A to protect it, rather than putting Civil Infrastructure on that row. They can then be justly accused of hypocrisy.
- **Deception.**  It is highly likely, following on from the 2 points above, that the Freedonians will assume that if they discover a Surface to Air Missile (SAM) site, that a vital target is adjacent to that location. Knowing this, it is perfectly possible for the Redlandians to exploit this assumption by "ethically" deploying their SAMs to protect their civilian infrastructure, knowing that, when detected, the Freedonians are more likely to attack the vicinity.

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[2] http://www.slate.com/articles/news_and_politics/war_stories/2002/03/dull_drone.html

- **Drones vs human intelligence or spies**. The need for a wider understanding of a possible adversary's aims and intentions, values and culture, as opposed to being hypnotised by the technical claims that a particular drone is capable of "seeing footprints through cloud[3]".
- **The inherent security risks of an "open society".** The uneasy balance between press freedom, individual liberty, data harvesting from social media and the general availability of information in an "open society" when compared to public and national safety, and the protection of the State and its institutions, needs to be clearly understood. In such a society it is inevitable that attacks will occur, but the dangers of destroying the freedoms that society is supposed to stand for by overreaction are always present.
- **Getting pushed into overreacting**. It is common for the Freedonians to start the game conducting surveillance on locations before attacking them but, when they see the Redlandians attacking without regard to ensuring only military targets are hit, they use the heavy bombers with Iron Bombs and start carpet bombing (with the result of generating many more Freedom Fighters for the Redlandians).
- **Just because you have defeated the enemy military doesn't mean the war is over.** The hatred and resentment cause by war can last for many years after a supposedly military victory. Destroying their military infrastructure may not be enough (as demonstrated by the Redlandian Freedom Fighters being able to continue to attack after all their military Infrastructure has been destroyed).
- **The Game is Deliberately Biased against the Freedonians.** Why would someone design a game that way? Do they have an agenda? Is it because of their political views? Do they have "left-wing" views and think that war is evil and that the West has unjustly waged oppressive military actions on other countries, so they have designed a game to demonstrate that this is dangerous, likely to cause overreaction and increased human suffering? Do they have "right-wing" views and have designed the game to demonstrate the need to additional investment in spies, more drones and increased funding for precision weapons? Or is it designed specifically to generate this type of discussion?
- **Why should the game be fair?** If the game is meant to be model (however imperfect) of real world situations one would hope that it is extremely unlikely that the players would go to war unless they think they have a real chance of winning – or unless it is a war of national survival where the only alternative is defeat and subjugation by their opponents – so perhaps it is only reasonable for the game to be a little one-sided.
- **Political control over military force.** The players were assigned roles at the start of the game. Did the Teams act in a way that demonstrated their role in supporting their political masters? Was it appropriate for both sides to do this – and if not, why not?
- **Sometimes it is better to behave with restraint until you have more information.** The Redlandians have limited resources – that much can be deduced from the counters being passed to and from the player team and the person running the game, otherwise why would they need to keep count? Therefore, perhaps it is better to stick with the plan of gaining intelligence to discover the real situation, before retaliating. Being goaded into using Iron Bombs might be in the enemy's interest.
- **One man's Freedom Fighter is another man's Suicide Bomber.** The two briefs pander to stereotypes to achieve an effect and create unstated assumptions in the player's minds. The obvious descriptions go unchallenged because this is a game and the players understand the game's mechanisms, so are impatient to get on with the fighting. This has parallels with soldiers who spend their lives training, so unconsciously are less likely to challenge assumptions in their professional eagerness to do what they have been paid for all their lives.

The session should be finished by taking time to make a suitable summary of the observations and possible lessons from an obviously flawed model. It is often preferable to present students with something flawed or incomplete and have them learn through discussion of those flaws and by filling in the blank spaces through reason, judgement and critical thinking; rather than presenting them with something that pretends to be correct, that they appear to have no choice but to learn by rote. Just because something is flawed doesn't mean that it isn't useful.
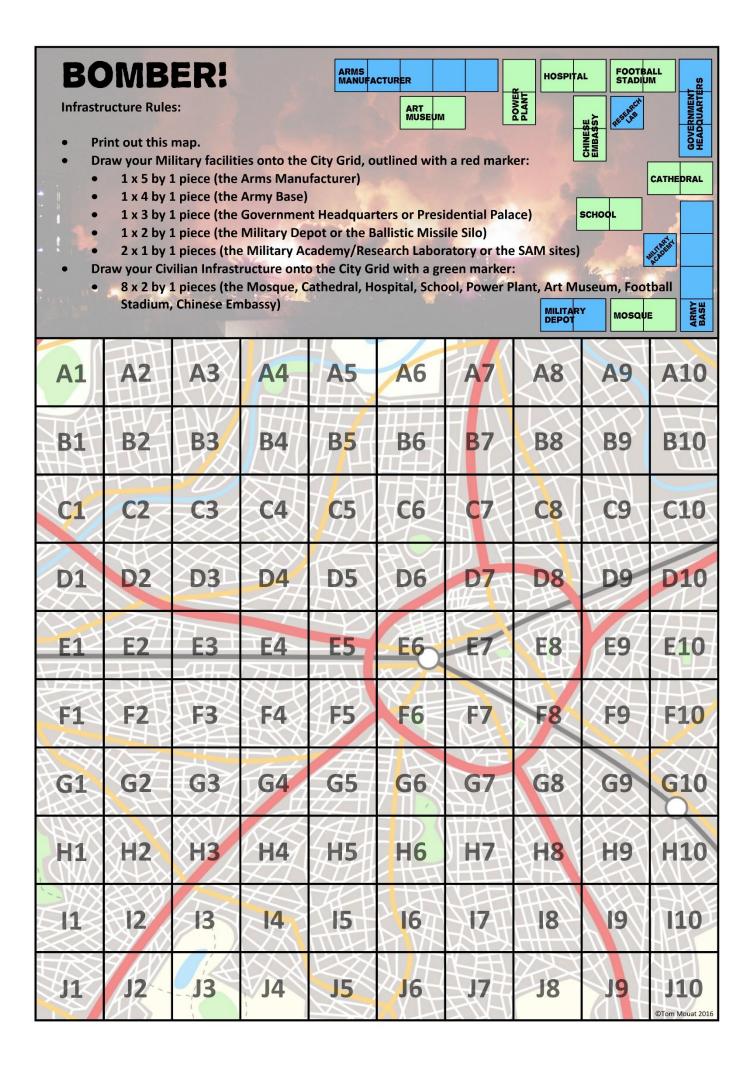
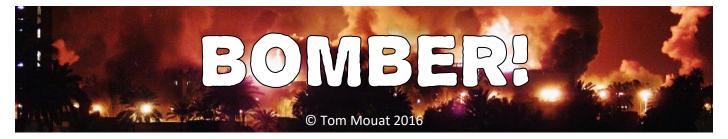If you have any observations or comments on this game, please get in touch with me:

Tom Mouat: tommouat@gmail.com

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[3] http://www.theregister.co.uk/2010/07/20/watchkeeper_farnborough/

# BOMBER!

**Infrastructure Rules:**

- Print out this map.
- Draw your Military facilities onto the City Grid, outlined with a red marker:
    - 1 x 5 by 1 piece (the Arms Manufacturer)
    - 1 x 4 by 1 piece (the Army Base)
    - 1 x 3 by 1 piece (the Government Headquarters or Presidential Palace)
    - 1 x 2 by 1 piece (the Military Depot or the Ballistic Missile Silo)
    - 2 x 1 by 1 pieces (the Military Academy/Research Laboratory or the SAM sites)
- Draw your Civilian Infrastructure onto the City Grid with a green marker:
    - 8 x 2 by 1 pieces (the Mosque, Cathedral, Hospital, School, Power Plant, Art Museum, Football Stadium, Chinese Embassy)

**ARMS MANUFACTURER**

**HOSPITAL**

**FOOTBALL STADIUM**

**POWER PLANT**

**ART MUSEUM**

**CHINESE EMBASSY**

**RESEARCH LAB**

**GOVERNMENT HEADQUARTERS**

**CATHEDRAL**

**SCHOOL**

**MILITARY ACADEMY**

**MILITARY DEPOT**

**MOSQUE**

**ARMY BASE**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | A10 |
| B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | B10 |
| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 |
| D1 | D2 | D3 | D4 | D5 | D6 | D7 | D8 | D9 | D10 |
| E1 | E2 | E3 | E4 | E5 | E6 | E7 | E8 | E9 | E10 |
| F1 | F2 | F3 | F4 | F5 | F6 | F7 | F8 | F9 | F10 |
| G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 |
| H1 | H2 | H3 | H4 | H5 | H6 | H7 | H8 | H9 | H10 |
| I1 | I2 | I3 | I4 | I5 | I6 | I7 | I8 | I9 | I10 |
| J1 | J2 | J3 | J4 | J5 | J6 | J7 | J8 | J9 | J10 |

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## Freedonian Outline

This is an asymmetric game of strategic conflict.

The game is based on the popular children's game "Battleships" as its basic mechanism, so the rules and mechanisms should be easy to understand. If all your military infrastructure is destroyed, you are defeated.

## Gameboard



Both sides use an abstract city map representing their nation's seat of power and influence. It has locations that represent the military industrial complex, others that represent essential services and vital cultural heritage, and others that merely represent populated areas. They are set up out of sight from each other.

## Game Setup

**Infrastructure Rules:**

Draw the military facilities (listed over) onto the City grid with a **RED** marker (this is to stop people moving things around and changing their minds). The players may wish to discuss the best way of doing this before they commit themselves as they won't have a chance to change their minds (unless they make a mistake, for example such as putting down 2 x 3 by 1 pieces of infrastructure – in which case they get a new sheet, but they have to merely correct the mistake and leave the other pieces where they had already put them).

Draw your civilian infrastructure and heritage sites (listed over) onto the City grid with a **GREEN** marker.

# The Democratic Republic of Freedonia – Military Brief

The Freedonians represent a high tech Western industrialised nation with advanced weapons and democratic ideals.

**Your Infrastructure:**

Military infrastructure:

- 1 x 5 by 1 piece (the Arms Manufacturer)
- 1 x 4 by 1 piece (the Army Base)
- 1 x 3 by 1 piece (the Government Headquarters)
- 1 x 2 by 1 piece (the Military Depot)
- 2 x 1 by 1 pieces (the Military Academy and the Research Laboratory)

Civilian infrastructure and Heritage Sites:

- 8 x 2 by 1 pieces (the Mosque, Cathedral, Hospital, School, Power Plant, Art Museum, Football Stadium, and Chinese Embassy)

**Capabilities:**

High tech drones capable of identifying targets in enemy airspace.

Precision guided weapons that will hit the target they are aimed at (but only once per turn).

You can permanently increase security on any square (reducing the chance of Suicide Bomber attack).

Iron "dumb" bombs that have a good chance of hitting the target, but might miss (up to 8 shots per turn):

- Roll 4+ on 1D6 to hit.
- Roll a 3 on 1D6 and the attack overshoots by one square.
- Roll a 2 on 1D6 and the attack drops one square short.
- Roll a 1 on 1D6 and the attack lands at a location chosen by the enemy, adjacent to the target (orthogonally or diagonally).

The bomber can specify the direction of bombing (E.g. I am attacking D3 from the direction of B3).

**Enemy Targets:**

Military infrastructure:

- 1 x 5 by 1 piece (the Arms Manufacturer)
- 1 x 4 by 1 piece (the Army Base)
- 1 x 3 by 1 piece (the Presidential Palace)
- 1 x 2 by 1 piece (the Ballistic Missile Silo)
- 2 x 1 by 1 pieces (the 2 x SAM Sites)

**Rules:**

Each turn you can call out locations on the enemy map and *either* attack *or* conduct surveillance on the location *or* you can select a location in your own Capital and increase security on that square (put a dot in the square).
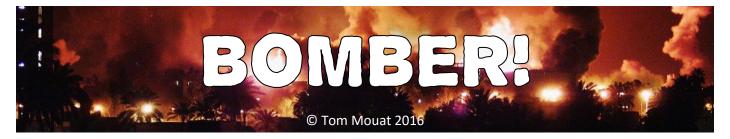
If you attack, you can use a precision weapon on a single location or use multiple heavy bombers with up to 8 Iron Bombs on up to 8 different locations, which will destroy whatever is at the square that is hit. You must specify all the targets at once – you can't drop an Iron Bomb and find out if it hits the target before selecting the next target (Battle Damage Assessment takes time!).

If a recce is used, the opponent must truthfully reveal what is at that location.

The enemy have SAM sites – if the target is adjacent to a SAM site (orthogonally or diagonally) the attack fails and the bomber is shot down. It the target is on the SAM site exactly; the SAM site is destroyed.

The enemy have a Ballistic Missile Silo which can target sites anywhere on the Capital (*except that they lack the range to shoot as far as Row A*) – in order to prevent it firing you need to destroy *both* of the squares it occupies.

# BOMBER!

## Redlandian Outline

This is an asymmetric game of strategic conflict.

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## Gameboard



Both sides use an abstract city map representing their nation's seat of power and influence. It has locations that represent the military industrial complex, others that represent essential services and vital cultural heritage, and others that merely represent populated areas. They are set up out of sight from each other.

## Game Setup

**Infrastructure Rules:**

Draw the military facilities (listed over) onto the City grid with a **RED** marker (this is to stop people moving things around and changing their minds). The players may wish to discuss the best way of doing this before they commit themselves as they won't have a chance to change their minds (unless they make a mistake, for example such as putting down 2 x 3 by 1 pieces of infrastructure – in which case they get a new sheet, but they have to merely correct the mistake and leave the other pieces where they had already put them).

Draw your civilian infrastructure and heritage sites (listed over) onto the City grid with a **GREEN** marker.

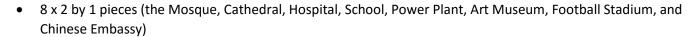# The Peoples Republic of Redlandia – Military Brief

The Redlandians represent a second tier socialist single party state with strong leadership and central authority.

**Your Infrastructure:**

Military infrastructure:

- 1 x 5 by 1 piece (the Arms Manufacturer)
- 1 x 4 by 1 piece (the Army Base)
- 1 x 3 by 1 piece (the Presidential Palace)
- 1 x 2 by 1 piece (the Ballistic Missile Silo)
- 2 x 1 by 1 pieces (the 2 x SAM Sites)

Civilian infrastructure and heritage sites:

- 8 x 2 by 1 pieces (the Mosque, Cathedral, Hospital, School, Power Plant, Art Museum, Football Stadium, and Chinese Embassy)

**Capabilities:**

1 x Ballistic Missile Silo (2 by 1) capable of hitting a target they are aimed at (*except that they lack the range to shoot as far as Row A*) - **but you only have 8 shots** because of sanctions imposed by the hated enemy.
2 x Surface to Air Missile (SAM) sites (1 by 1) protecting adjacent squares.
**8 x Freedom Fighters** operating underground in the enemy's capital, capable of destroying a target they are sent to.

**Enemy Targets:**

Military Infrastructure:

- 1 x 5 by 1 piece (the Arms Manufacturer)
- 1 x 4 by 1 piece (the Army Base)
- 1 x 3 by 1 piece (the Government Headquarters)
- 1 x 2 by 1 piece (the Military Depot)
- 2 x 1 by 1 pieces (the Military Academy and the Research Laboratory)

**Rules:**

Each turn you can attack a single location and destroy it using Ballistic Missiles or you can attack as many locations as you like with your Freedom Fighters, up to the total number you have (but they will be killed in the action). However, if the square has increased security you will need to score 4 or more on 1D6 to succeed (and they will still be killed).

You have SAM sites – if the target of the enemy attack is adjacent to a SAM site (orthogonally or diagonally) the attack fails and the bomber is shot down. If the target is on the SAM site exactly; the SAM site is destroyed.

**Scoring:**

You will note that you do not have enough resources to defeat the hated enemy unless you are very lucky. But you realise that every time they bomb your cities, you receive additional supporters to your cause!

- For each enemy attack that doesn't hit your military infrastructure or your civilian infrastructure, you can recruit an additional Freedom Fighter.
- For each attack that hits your civilian infrastructure you can recruit 3 additional Freedom Fighters.
- For each enemy bomber you shoot down, you can recruit an additional Freedom Fighter.
- If you run out of both Missiles and Freedom Fighters, you can spend a turn recruiting an additional Freedom Fighter.

When your military infrastructure is all destroyed, your Government lacks the capacity to organise additional resistance – but any Freedom Fighters that have already been recruited may still continue to fight until they are all used up. So, in the face of certain defeat, you may also cause the despised enemy to lose as well!