



THE COMPLETE GUIDE TO
COMBAT CITY
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“As the world becomes more urban, we need to be prepared for cities to become battlefields.”

Modern War Institute, Urban Warfare Project, 2017

INTRODUCTION

The Complete Guide to Combat City looks at fictional enemy cities built by the military in Europe, the US and the Middle East to train for war. The current military doctrine “train as you fight” favours realistic hands-on training for its troops. Military doctrine considers the practise of urban warfare tactics in realistic urban environments to be an essential preparation for soldiers prior to deployment. Innumerable urban combat facilities have been built by contractors from the armed forces on army ground in the last eighty years. The military is the exclusive developer of these combat towns that have silently multiplied and spread throughout the western hemisphere. Unmarked on maps, and largely unnoticed by urban design, architecture and planning communities, these sites constitute a shadow global-city system. They are capsules of space designed to mimic the strategic environment of the city – now seen by the military as a critical arena for future wars.¹

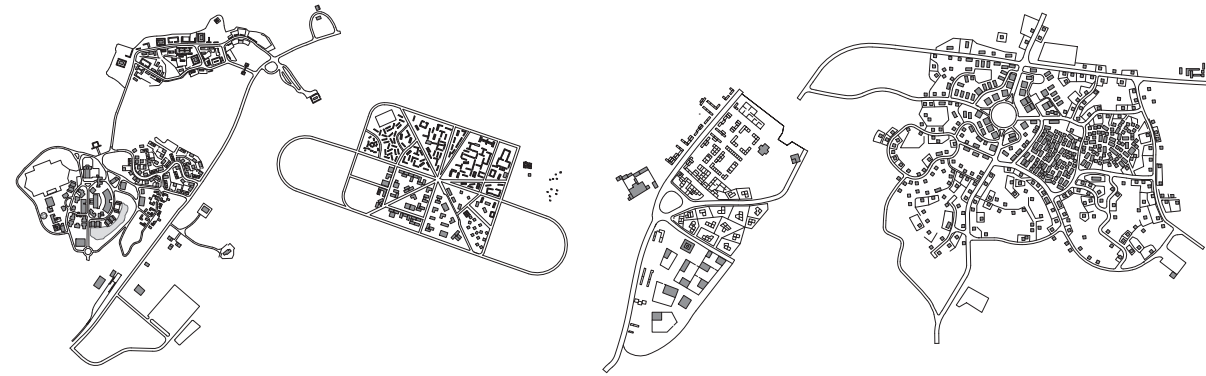
Cities, according to military academic research, are the future battleground. Russell Glenn argues in the preface of his research paper on urban warfare that the armed forces are ever more likely to fight in cities as the world becomes increasingly urbanised and the nature of battle methods change.² Conventional warfare is being replaced by asymmetric or irregular warfare, which is fast becoming the traditional means of waging a battle. The armed forces assume that most of these unconventional wars will be fought in cities. Reports from the Modern War Institute claim that insurgency, terrorism and resistance movements have already relocated their operational bases from the shelter of inaccessible territories to the protective anonymity of the city.

Military theorists consider cities, which are by their nature complex, unpredictable, messy, contradictory and ever changing, to be a natural stage for threats, terrorist attacks, demonstrations and other disruptive actions threatening order and control. Launching a military operation in a dense urban area, whether hostile or defensive, is challenging and complex. Conventional warfare tactics do not apply, troops must split into small autonomous fighting units that, in the best of cases, orchestrate a coordinated operation by improvising within the densely populated urban terrain. The prospect is daunting, and the potential casualties so high (urban warfare has no parallel, in scope or magnitude, in any other battle environment) that commanders want their armies to be well prepared.³

¹ Stephen Graham, *Cities Under Siege: The New Military Urbanism*, p. 183, Verso, 2010.

² Russell W. Glenn, *Combat in Hell, A Consideration of Constrained Urban Warfare*, Rand Monograph Report, 1996.

³ John Spencer, *The city is not neutral: Why urban warfare is so hard*, Modern War Institute, 04.03.2020.



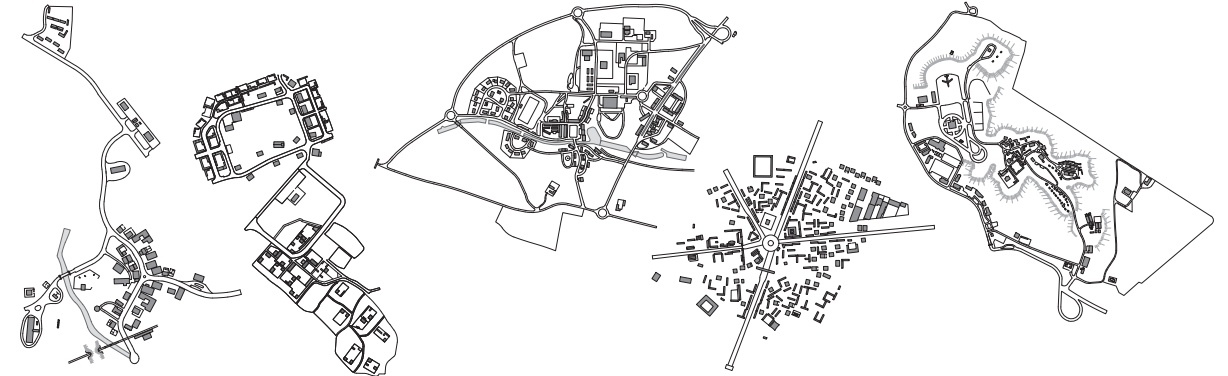
In this context, it is not surprising that urban combat training sites are in great demand. Many of these shadow cities are of considerable size. These elaborate, life-size replicas of enemy towns are designed to practise the art of war and to acclimatise the soldier with the aspect, rules and characteristics of the city that is to be invaded. A fortnight's immersion in one of these simulated combat sites has become standard training procedure prior to departing for war. As new armed conflicts arise, these mock-cities shed their skins and smoothly adapt their appearance to be reborn in the guise of the latest enemy.

Military restrictions and security measures make it difficult for the interested civilian to visit these sites in person. There is, however, extensive video coverage of these combat towns in action. Every training soldier is issued with a GoPro (a small mounted camera for close-up action shots), that records every move taken during the warfare training. The battle is filmed from as many angles as there are men on the field, creating a never-ending, shaky-handed stream of visual documentation about the city. Uncommon cityscapes strangely blur into endless sequences of running across a street amid explosions, climbing into windows and breaking down doors, shooting from the rooftops and holding hostages on the main square below the ever-present mosque. As exercises repeat and footage is added, the image of the city slowly emerges between billowing smoke and rifle fire.

The Complete Guide to Combat City is my second book on fictional cities. *Modern Ruins* (Ambit, 2012) surveyed unfinished vacation cities (casualties of the financial crisis and the bursting of the real estate bubble in 2008) and analysed the dreams, promises and fall-backs that led to the premature ruin of these wholesale paradises on Earth. *The Complete Guide to Combat City* looks at fictional enemy cities built by the military to train for war. Paradise and hell, swimming pools and machine-gun fire are antagonistic; but both, wellness and war, unfold in cities that are designed and built to simulate other, often faraway places.

The counterfeit architecture of speculative leisure enclaves uses the strategy of deception to bolster profits. The property market embellishes and masks reality, but it does not make it any less real. The artful stage-management of deception in combat cities on the other hand, produces real symptoms and hyperreal effects among the troops that begin to break

Urban warfare facilities, from left to right: Lejeune (US), Yodaville (US), Chinchilla (Spain), Baladia (Israel).



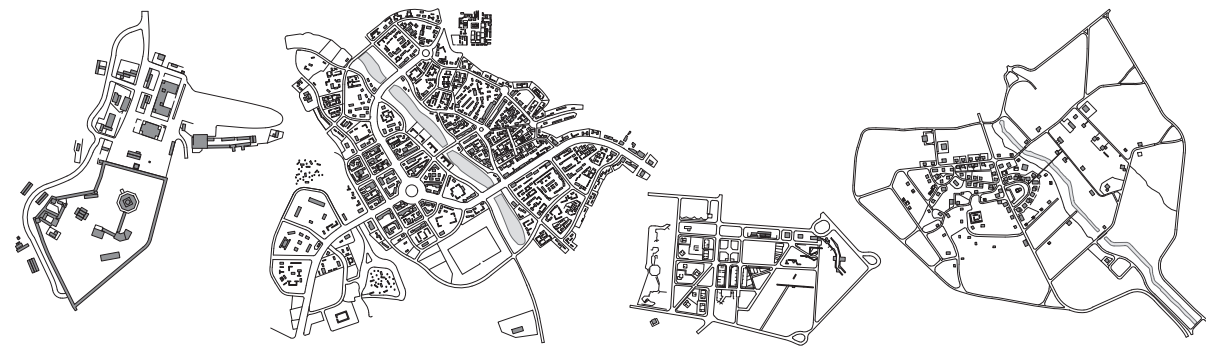
Urban warfare facilities, from left to right: Hohenfels (Germany), Eastmere (UK), Jeoffrécourt (France), Medina Wasl (US), KASOTC (Jordan).

down the differences between the simulated and the real. Notions of true and false, genuine and fake blur into a continuous vivid cityscape of displaced and reimagined urban scenarios populated by the “other”.

If fake cities, fictitious enemies and staged combat can be experienced as genuine, is there any need to differentiate between authentic and simulated environments when analysing them? Does it actually matter? Many first-hand accounts from soldiers confirm the collapse in perceptual and cognitive distance in simulated cities during combat training. People, streets and buildings in these towns may not be authentic but they are definitely real, most of them at least. Real enough to stage terrifying urban combat on a convincing scale. Fake enough to be unique in its use, form and function. This publication embraces all pertinent cities' features, be they fictional or real, and presents them, commented, illustrated and classified as a city guide.

Are encyclopaedic templates for city guides (i.e. history, governance, geography, demography, economy, culture, religion and infrastructure) useful when it comes to describing urban simulations? Does it make them sound more real? Valid? Genuine? Is the fictional aspect a limitation or an asset for this kind of analysis? The intriguing question of whether simulated cities have the capacity to grow beyond their representational purpose, and constitute a viable town in their own right despite their fictional character, is one of the key issues this urban study aims to reveal. This city handbook will put the power of simulation to test and explore if the fake city can resist or even surpass the comparison with its mirror image. This illustrated publication provides a unique opportunity to tune out machine-gun fire and explosions and focus on the dwellers, the history, the urban culture and building style of these simulated city fragments.

This guide analyses the fundamental aspects of military mock-cities in an accumulative rather than a comparative fashion. The reasons are manifold. Cities are complex, living organisms with countless overlapping systems, connections, interests and cross purposes. Size and density are fundamental for the urban character of a settlement. Mock-cities are neither big nor very complex. They are purpose-built urban fragments that represent a larger whole, vignettes of a potentially more extensive, denser, and farther reaching city.



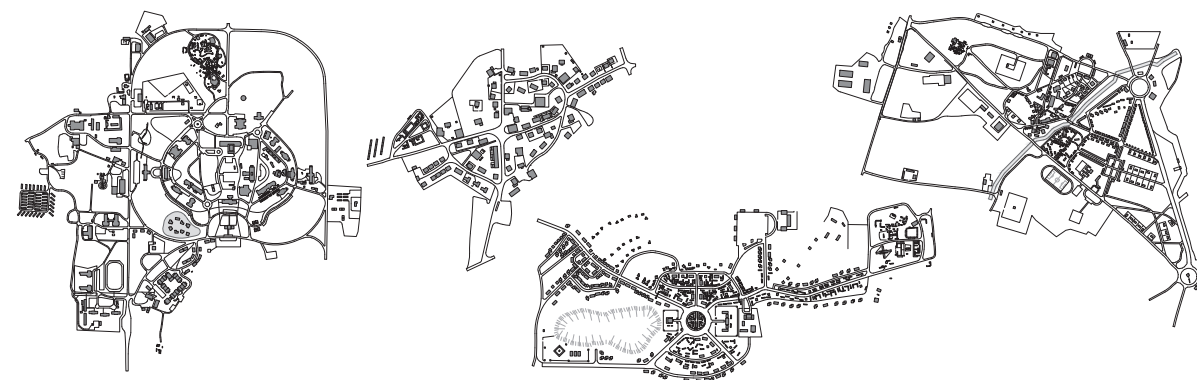
The image, layout and workings of a city cannot be extrapolated from a single representative sample, nor can this sample be its mere extension. A simple increase of the fragment in size would result in a homogeneous building pattern closer to a suburban sprawl than an urban fabric. An accumulative rather than extrapolative comparison of these township fragments will avoid the limited scope of the city samples and generate, by their addition, the appropriate size and complexity of a township without losing the specific qualities and characteristics of its constitutional elements. Embedding a variety of the different types of mock-cities as neighbourhoods into a greater city plan will produce a composite urban fabric and create a plausible city plan.

But there is more to a city than urban fabric. History and evolution also play an essential role in the forming of its character and spirit. Time foments changes and adaptations that will validate the cities' vitality and capacity to function. Combat towns have a short history, most of them are less than twenty years old. Nearly all of them are built from scratch and have had little time to develop beyond their initial scope. The vitality of these shadow cities will benefit from an integral analysis with the proposed urban mosaic of neighbourhoods. The pooling of the individual timelines enriches the urban chronicle and helps to reveal the correlation between cityscape and conflict over time.

The Complete Guide to Combat City reconstructs the physical aspect and daily workings of these urban combat centres from video footage, satellite images, military photographs, army supplier's catalogues as well as written information from military, academic and media sources. A selection of 17 existing, fully functioning urban combat centres located in the US, Europe and the Middle East make up the body of the work presented here. The cases are chosen for being architecturally elaborate examples of simulated cities in terms of size, complexity, relevance and sophistication. Every one of them is used for military pre-deployment training, the soldiers' last stepping stone before the actual battlefield.

A great number of shadow cities can be found throughout the world. However, military needs and budgets for simulated training cities vary greatly (hence the dominance of American sites) and not all of them are well documented. The research of Russian and Chinese urban combat centres, for instance, due to translation difficulties and digital access

Urban warfare facilities, from left to right: Anaconda (US), Wadi al-Sahara (US), CTZUB (France), Marnehuizen (The Netherlands).



Urban warfare facilities, from left to right: Muscatatuck (US), Copehill Down (UK), Medina Jabal (US), Schnöggersburg (Germany).

problems, does not yield sufficient information to confirm enigmatic satellite images and build a solid case. Others seemed irrelevant. The lack of academic sources or other sort of official information has required the use of additional, less formal documentation in some of the selected cases to complete the picture. The collection of simulated enemy cities presented in this publication, however incomplete, facilitates the detailed study of urban combat centres and ratifies the large scale construction of these "imaginative geographies" throughout homeland territory.⁴

The fictional removal of the geographic distance between them bonds the urban fragments into one large city with seventeen different districts. The poetic license of annulling the relative distance between them facilitates the analysis of fundamental aspects of the mock-cities and helps to unravel the urban complexities of the combat town. All numbers and figures, geographical conditions, orientation and size are taken from above mentioned sources and remain unaltered. *The Complete Guide to Combat City* looks at the specifics of the town, its people, language, culture, food and economics and describes it as what it presents itself to be: a city.

⁴ Imaginative geographies are self-constructions of the West that underwrite and animate its constructions of the other. See Edward W. Said, *Orientalism*, Pantheon Books, 1978; Fernando Coronil, *Beyond Occidentalism*, in *Cultural Anthropology* 11, Vol. 1, pages 51-87, February 1996.

HISTORY

The first chapter presents the nonagenarian history of Combat City and looks at how military conflicts have shaped the city. The construction of each of the 17 districts responds to a specific war. Each enemy has shaped the image of the city, leaving a distinct mark on the urban fabric and its buildings.

We begin with the first district, Hohenfels, which was inaugurated in 1938 to train German troops during the Second World War. Four years later, British soldiers rehearsed the battle of Normandy in the simulated Nazi village of Eastmere. The Israeli Defence Forces prepared the Lebanese invasion in the Middle Eastern district of Baladia. Camp Lejeune was founded during the Cold War and built in European style. It was later upgraded to prepare US troops for the Afghan War. The British Army prepared for the Irish Troubles in the Bavarian style mock-village of Copehill Down, which opened in 1988. Two years later, the Yugoslav Wars prompted intense training in the Marnehuizen, the Dutch take on a suburban village. Yodaville, which opened for bombing in 1999, is made from cluster-bomb containers used in the Vietnam War. The invasion of Iraq in 2003 drove the construction of orientalised districts like Medina Wasl, Medina Jabal, Wadi al-Sahara and Anaconda to cater for pre-deployment training of the US forces. The small, roofless district of Chinchilla began training the Spanish Armed Forces in non-specific conflict training in North Africa and the MENA region in 2007. The Jordanian King inaugurated the international warfare Olympics in KASOTC the following year. The French Army of the Land have trained for all eventualities in the native looking Jeoffrécourt since 2011. The German Army began to move their tanks through the unfinished district of Schnöggersburg in 2018.

Most of Combat City’s districts are built, paid for or used by members of the NATO alliance with shared military interests. Takeovers and co-ownership between the seventeen combat training sites are common. Most joint ventures are driven by economic and geopolitical reasons. Other, less formal partnerships, promote the shared use of the facilities – so as to benefit from the synergistic effects of collective training sessions. This chapter reveals ties and unsuspected correlations between these players and aims to chart their game on the worldwide combat playing field.





Wadi al-Sahara, Camp Lejeune, Jeoffrécourt, CTZUB

2011

to replicate the sounds, smells and traditional Afghan trappings. These inclusions complete the stage for military lessons on winning hearts, defusing improvised explosive devices and building better relationships with the locals.

The year 2011 began with several events significant to the development of Combat City. The Arab Spring brought tension to the southern Mediterranean. The Pakistani Spring was marked by the assassination of Osama bin Laden. Unrest in Syria escalated to an armed conflict after protests calling for the removal of Bashar al-Assad were violently suppressed. Further to the south, Yemen’s political crisis was building fast. Two months before the spring unrests, American military gathered in large numbers to celebrate the completion of Wadi al-Sahara, by now the largest and most elaborate Combat City district. It had expanded all the way to the rocky beds of KASOTC and spread north to connect directly to Baladia. Its southern fringes now blended smoothly into the periphery of Medina Jabal, creating a single, continuous urban fabric that extended all the way to rural Ishmara to the west.

Wadi al-Sahara had developed into a dense, urban area with the capacity to accommodate the training of up to 15,000 marines and sailors simultaneously.⁵⁸ Most of its 1,200 buildings are made from prefabricated metal containers of all colours and sizes. Central, representative buildings are built in solid concrete. The visual impact of Wadi al-Sahara is radically modern in its simple utilitarian building style; there are no concessions made for decorative or culture-specific detail. Architecturally, Wadi al-Sahara embodies a type of minimal combat building style that has found many followers and is rapidly extending throughout the city. The lack of folkloric detail in representation of the enemy is compensated by the use of smell generators and acoustic embellishment as well as its numerous, diverse population. Markets, hotels and buildings are manned with Iraqi actors. Some 900 of them, representing civilians, officials and insurgents, live and work alongside the practising marines. It is their job to expose the troops to the chaos and stress of close combat and to gently but firmly remind them that being polite is considered to be the new force-protection priority. After the inauguration ceremony, guests watched tanks, amphibious vehicles and marine infantry in a battle exercise in the town. Amid the distant boom of artillery, the crackle of automatic weapons and the flash of explosives, the troops suffered their first casualty. A two-year old

Wadi al-Sahara’s vast footprint covers some 1,500 × 1,350 m of desert sand. It is not a place for walking. The scale of its unpaved roads is suitable for marching troops and large convoys of tanks. There is no place to sit and rest. The buildings provide no shade and there is no foliage to be found.

58 Bryan Finoki, *MOUT urbanism*, <https://subtopia.blogspot.com/2008/02/mout-urbanism.html>. last visit: 02.06.2018.



Population

The city's housing stock can accommodate up to 50,000 inhabitants.¹⁹ There is, however, no reliable census of how many people currently reside in the town. The majority of the population is transient and will increase or decrease according to the military training schedule. The population is made up of three professionally-related groups: soldiers in training, professional enemies or non-combatant civilians. There is a diversity of origin, culture or income. Each group's role is crucial to the outcome of the battle, but their interests and values are fundamentally incompatible with one another; mutual distrust runs deep. Each component feels that it carries the biggest burden and is wronged or misunderstood by the other. They bicker and fight on the battlefield, without forgetting that they depend on each other to train, be paid and stay alive.

The city is owned, used and run by the armed forces and 255,500 soldiers fight here throughout the year. They move in large groups; the numbers vary according to the task at hand. Big pre-deployment missions often involve entire brigades that total some 2,500 to 5,000 soldiers each. Minor military challenges are handled by battalion size groups that do not surpass 900 men. The city's streets are filled with uniformed soldiers who are ready to engage in battle. Their day begins with a conflict and ends with combat, regardless of the neighbourhood, the weather conditions or the time of day. Each one of the city districts runs their proper combat script with individually customised narratives. Enemy specifics apart, all battle scripts include guerrilla combat, convoy ambushes, IED (improvised explosive device) encounters, and televised beheadings.²⁰ The repetition is relentless, day after day, without end or mercy.

Since military drills rely heavily on repetition, the curse of having to relive the same conflict every day suits the army far better than the civilian population. The city dwellers suffer from the violent time loop and typically develop depressive-claustrophobic symptoms. Many struggle with having to get out of bed in the morning and face yet another "Groundhog Day".²¹ The majority of the dwellers spend as little time as possible in the city, many dream about obtaining permanent leave. Armed conflicts, precarious security, car bombings, kidnappings, suicide attacks and harsh living conditions make the town rather challenging and unattractive to live in. The perpetual shortage of women does not make it any better. The gender ratio of the population is extremely poor, and birth-rates are non-existent. Ephemeral washing-lines with tattered garments are a symbolic reminder of their absence.

Right: Washing-lines and abandoned toys are a common sight in the city. Women and children are not.

¹⁹ See chart on page 64.

²⁰ Scott Magelssen, *Rehearsing the "Warrior Ethos", Theatre Immersion and the Simulation of Theatres of War*, Project Muse, March 2009.

²¹ *Groundhog Day*, film by Harold Ramis, 1993.





Dummy Drag. Dummy or buddy drag is a standard means of moving casualties out of danger or to recover the deceased from the battlefield. (Left)

Mannequin hostage rescue mission with plenty of casualties during an airbus seizure event at the 7th annual Warrior Competition in KASOTC. (See central image right)

Life-size dolls, automated civilians on wheels, stick-figures and pop-up targets make up the stable city population. They are the only dwellers that can stoically put up with the violence and permanent crossfire without flinching or other recognisable signs of panic. Their surprising patience and capacity to suffer without complaint is due to their outstanding mechanical resilience. The dolls come in all shapes and sizes; some are more sophisticated than others. The soft, life-size kind have no specific features and are usually clad in neutral black. Their purpose is to be heavy and floppy when being piggy-backed to safety by the training troops. The upmarket dummy version sports a proper head and torso and comes with a full set of clothes to grip onto during the “dummy drag” exercise. A special dummy travel edition, designed for airplane highjacking simulations, includes a flesh-coloured knob for easy handling on the back of the passenger’s head.

A large proportion of the inert dummy civilian population is injured. Hard-shelled mannequins are supplied with detailed and realistic wounds. Most of them lie on the street as if in desperate need of help. The basic dummy version will silently wait to be found and endure being moved to a safer place without uttering a sound. Other mannequins groan or bleed if they are not treated with care. Sophisticated, high-end medical dolls will not only bleed, blink and breathe, but additionally produce five different kinds of bowel sounds.²²

Avatars are very useful for military training, but nothing can beat human interaction. Actors and hired extras make up the gross majority of the cities’ living civil population. Role-players are regularly hired to increase human presence on the street. They animate markets and fill the city squares amid explosions and clouds of smoke. The so-called “civilians on the battlefield” (COBs) are prepped to interact “naturally” with the troops – with loud gesticulations in a foreign language – which, more often than not, intimidates and confuses the young trainees. Interacting with troops can be a rather dangerous job. A civilian on the battlefield is a potential enemy and possible target for any soldier. Many have a hard time telling the innocent from the guilty.

There have been changes in the development, sourcing and (relative) sophistication of these role-playing populations. Former training scenarios were basic. Early military attempts to represent the civilian population

²² Luke Tress, *When a dummy screams for help, the IDF’s future medics rush in*, Times of Israel, 25.08.2016.





did not get beyond a handful of female marines dressed in bedsheets²³ and handing out palm-cards to remind the predominantly male soldiers of their diplomatic skills. Current urban combat training has turned into an elaborate production with hundreds of live-in role-players, who participate in scenarios scripted by specialist theorists. Today, civilian role-players populate the streets that had been reserved for the enemy alone. Their presence adds complexity to the urban battlefield. They might simply linger, wondering what's going on while getting in the way of the soldiers, hold a spontaneous demonstration or peacefully mind their shop.

Their respective roles – as police chief, store keeper, housewife, journalist or aid worker – are part of the greater script²⁴ that includes peacekeeping and stabilisation scenarios that are integral to the siege. Soldiers are required to engage in cultural transactions with the local citizens while they patrol the streets. The citizens, on the other hand, are instructed to keep careful tallies of promises made by the military and are encouraged to negotiate and claim retribution for their dead. Newscast role-players must write critical battle reports to remind troops that their actions can have far-reaching strategic consequences. Current military doctrine expects soldiers to master the skill of breaching, attacking and killing with cultural awareness and diplomatic skills.

Role-players are hired for continuous three-week periods. Their living conditions are precarious, most facilities have no heating or electricity, water is scarce and sanitation resources limited.²⁵ The fortunate ones have a bunk bed in a gender segregated house, but most will have to sleep in metal shipping containers or tents. Rules and regulations are tough. No one is allowed to leave the training site for the entire duration of the exercise. For security reasons, phones and laptops are out of bounds. The consumption of alcohol or drugs is strictly prohibited. The military police conduct breathalyser tests on a regular basis and any breach of rules results in instant dismissal.²⁶

There are three groups of role-players that work as civilians on the battlefield. The group of amateur actors is made up of students or part-time workers who badly need the income. The second set is made up of professional role-players who work for defence contractors and bring a second language, theatrical skills and an uncontaminated background to the field. The third group of extras are the so-called culturally “authentic”

Role-players animate the immense central square of the Wadi al-Sahara district. Local actors pose in elaborate outfits as Afghan civilians on the battlefield in Hohenfels. (From left to right)

²³ James Der Derian, *Virtuous War*, p. 285, Routledge, 2001.

²⁴ Derek Gregory, *The Rush to the intimate*, *Radical Philosophy* 150, 2008.

²⁵ Anna Merlan, *It takes a fake military village*, *Topic*, 28.02.2019.

²⁶ Optronic GmbH, *Civilians on the Battlefield, Terms and working conditions*, <https://www.us-statisten.de/en/information/>, n.d., last visit: 20.02.2024.



Iraqi role-players teach cultural awareness. Soldiers learn that chewing tobacco or placing their helmet on the ground are disrespectful acts that can spoil an otherwise promising meeting. A marine signals a “culturally authentic” role-player to stay away. (From left to right)

role-players. They are citizens from the enemy country who essentially play themselves.

The daily work routine starts at 5 am; breakfast is served at 6 am and by 7 am, everyone (equipped with Multiple Integrated Laser Engagement Systems or MILES) has to be on the field. From then on and during the entire day, soldiers shoot at them with special training weapons. MILES is a harness in camouflage colour with infrared sensors and a built-in computer. If you get shot, it beeps briefly. You are killed, the beeping stops. An infrared gun is the only means to be revived. When this happens, the computer will affirm the player's new status with a triumphant “Resurrected!”²⁷ The mission is open-ended and no one can be sure when the official workday will wind up. Actors often complain about having to be in character for 24 hours a day, or that their sleep is frequently interrupted by improvised role-playing scenarios or other unforeseen events.

Realism is a key objective in contemporary military training and there is a growing demand to enrich scenarios beyond symbolic play. Smells of cooking and blood, disjointed scattered limbs,²⁸ soundtracks of donkeys braying and explosions are orchestrated into hyperrealistic scenes to accelerate the soldier's suspension of disbelief and get him straight into battle mode. Culturally “authentic” role-players, real-life amputees²⁹ and genuine livestock are considered to be key elements for scenarios that are to leave a lasting impression on the troops.

Regular role-players need on-site support from experts in make-up, culture, special effects, production, linguistics and wardrobe in order to act and look convincing. The logistics and costs involved are considerable and the daily preparation is slow. The “authentic” role-players, on the other hand, will need none of the preparation; their expert knowledge is natural and enables them to add detail and nuance to their role that go beyond the battle script. Lower costs and increased efficiency are a strong argument for preferential hiring.

The same logic is applied when hiring real-life amputees and war veterans as stand-ins for the wounded and to simulate the effects of suicide bombs. The injuries must be as convincing and gruesome as possible because soldiers must be prepared for the worst. Professional silicon and fake blood make-up will never be as frightening as the already mutilated body of an

²⁷ 15 Tage auf dem Schlachtfeld, *TAZ*, 26.11.2019.

²⁸ See Strategic Operations Inc, *Catalog of fake body parts*, <https://www.strategic-operations.com/vspsfiles/downloadables/Body-Parts-Catalog-2020.pdf>, 2020, last visit: 20.02.2024.

²⁹ Geoff Manaugh, *In The Box: A Tour Through the Simulated Battlefields of the U.S. National Training Center*, www.bldgblog.com/2013/05/in-the-box-a-tour-through-the-simulated-battlefields-of-the-u-s-national-training-center/, last visit: 30.01.2024.



Early morning urban combat drill in Wadi al-Sahara.

The locals consider the troops to be a rather unpleasant bunch since they don't interact with anyone and move in close-knit groups. Soldiers are exclusively reliant on each other for support, comfort, and defence; personal interests are subsumed into group interest for the benefit of greater protection. Ill-humoured and physically tired, they trudge around town in squad size groups. They speak in code, bark orders and act aggressively. Despite, or maybe because of their age, they act as if they owned the place. They break down walls and invade private homes without any word or excuse. They are jumpy from exertion and lack of sleep. Excessive intake of both caffeine and sugar fuels their erratic behaviour. After all, fighting is extremely wearing on both body and mind, especially in cities. Dense urban fabric increases the difficulty of locating the enemy and requires constant alertness in anticipation of enemy fire from multiple directions. Having to take vital decisions with little time and insufficient information produces mental stress. The sense of permanent danger overstimulates the nervous system and produces psychological disorder symptoms such as insomnia, lack of motivation, high anxiety, neuro-emotional stress, fatigue, and hypochondria, all of which are hindering and undesirable on a battlefield.³¹

Soldiers forget that they are not yet engaged in real battle, that they are fighting a simulated war. It rarely takes them longer than 48 hours to submerge themselves in the battle script without harbouring a shadow of doubt. The fine line between reality and fiction blurs as body and mind succumb to the authenticity of the illusion. Genuinely felt fear or rage can cloud the perception and modify the soldiers' operational conduct: many develop authentic battle fatigue. Military careers are known to have found an abrupt end during the training sessions, some for showing excessive fear and others for unnecessarily killing civilians.³²

No battle can be waged without an enemy. To guarantee combat excellence, the army selects the official enemy from within its own ranks. Generally, a small proportion of the proper training group will represent the opposing forces.³³ OpFor positions within the army are much sought after and some regiments have taken to embodying the enemy almost exclusively. Re-enacting the bad guy has many advantages. It breaks the routine of having to follow orders and offers opportunities for individual initiative. Not having to adhere to any dress code is already reason enough to cross the line and play the game from the other side.

31 *Field Manual No. 3-06.11, Combined Arms Operations in urban terrain, Chapter 1-13, Headquarters, Department of the Army 28.02.2002.*

32 *D. Filkins and J. Burns, Mock Iraqi villages in Mojave prepare troops for battle, NY Times, 01.05.2006.*

33 *Geoff Manaugh, op. cit.*



Customised robotic moving targets dressed for battle.

Next double page: different members of the heavily-armed robotic insurgency squadron on wheels.

The opposing forces in Combat City are run by a highly trained, if somewhat unruly, local army regiment that knows its way around town. Their privileged knowledge of the local conditions gives them a strategic advantage over the armed forces; their unconventional warfare tactics makes them a dangerous adversary. They work in small, agile groups and don't get a rest until, if all goes according to plan, chaos is properly invoked; or, if things turn out badly, they are shot in the attempt. The only drawback about impersonating the enemy is that the role can stick. Regular soldiers don't like to fight alongside their OpFor colleagues. No one trusts a former enemy, not even a fictional one.³⁴

To avoid major disciplinary problems within the troops, the army has recently decided to supplement their enemy contingency with machine-made warriors. Robots, unlike soldiers, don't care much about the contempt of their comrades and happily play the role for which they are programmed. Robotic autonomous moving targets can be bought off the shelf and customised to suit any battle scene.³⁵ Once they are dressed for the occasion and fitted with a new face and weapon, they are sent into combat to boost the tireless and fierce looking robotic opposing force (ROpFor). Robots are flexible and somewhat opportunistic. They are of singular character and come with a strong motor and an acute sense of independence. They will readily change alliance for a better deal, desert a companion if there is a problem and change their physical appearance to evade being caught. They slip into the role of the enemy in the morning and dress up as a friendly civilian for dinner. The next day might find them acting as protesters in a public order crisis or emulating the role of a perpetrator during live fire. They love the thrill of the unforeseen, and rapidly adapt and modify their behaviour to ensure their survival. Generally, they live alone or in small groups, it is rare to see more than ten of them together in one place. Occasionally you see a couple, but never in a romantic sense. Maybe these robots just share the burden of being a target, but not a common bed. Their personal hygiene is deficient, and it seems as if they care little about their looks. Their faces are stern and pockmarked with projectile marks, their clothes faded and torn. But they do take a lot of beating throughout the day and have to bend over backwards every time they are fatally hit.

34 *Lisa Burges, Should OpFor soldiers be sent to war, Stars and Stripes, 26.09.2004.*

35 *See Marathon Targets' extensive product catalogue of autonomous robotic targets for live fire training.*

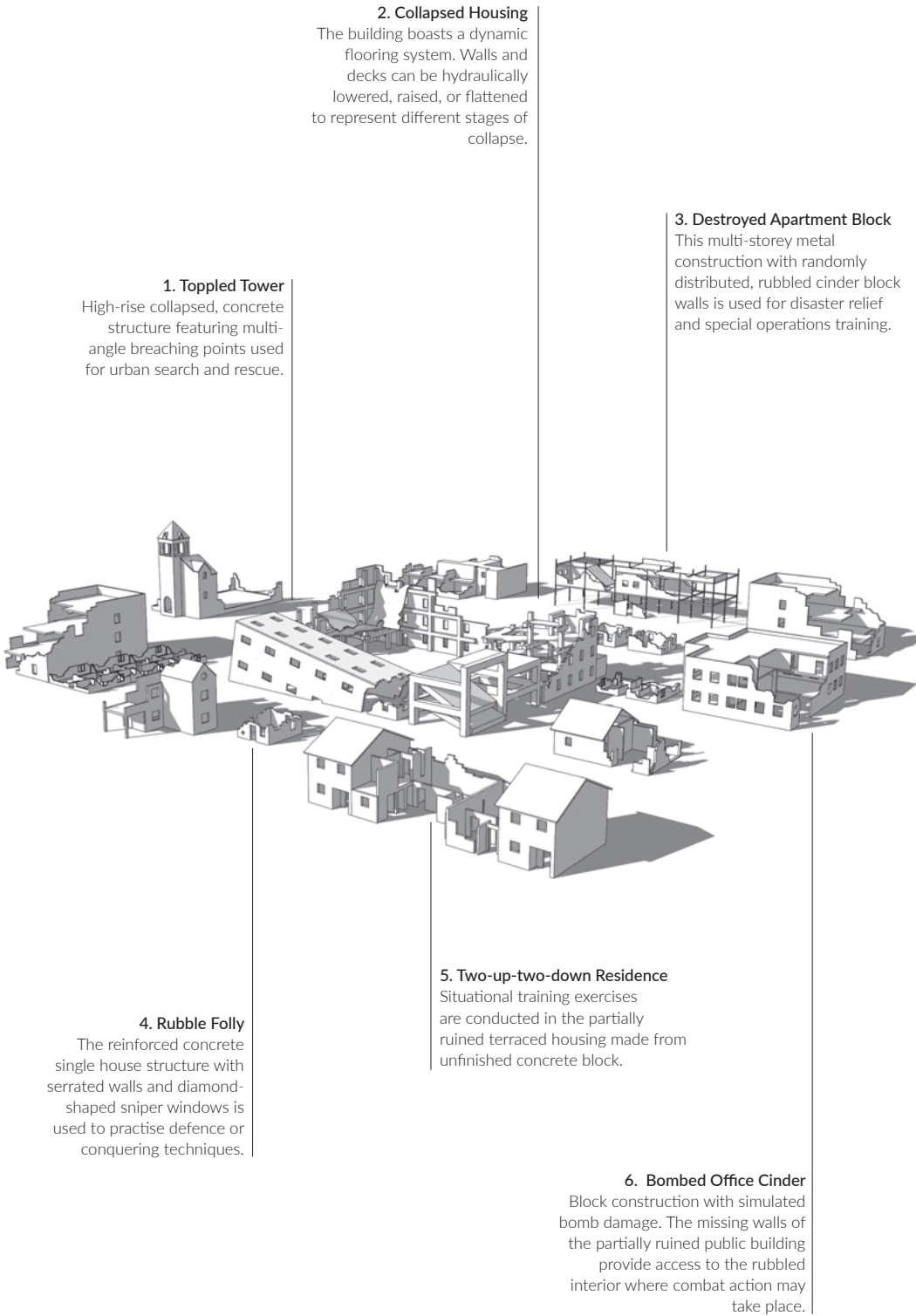


URBANISM AND ARCHITECTURE

It's been close to a century since its founding in the Second World War and Combat City has grown into a town with entirely specific urban and architectural typologies. Architectural elements – such as high-tech ruins, theatre flats, roofless structures, de-gabled buildings, surface tunnels and container hide-outs – make up this unusual city fabric. Its layout is also remarkable. Nothing within the city is where one would expect it to be. It is perfectly possible to find a suburban residential area next to a central square that faces an industrial estate with representative government buildings overlooking a slum. The way to move through the city is also noteworthy. Accessing a building, for instance, is a challenging task. The preferred method is to ascend the external stairs to the top so as to enter the building from the roof. If pressed for time, entering or leaving through a window is another realistic option. Doors are forbidden throughout the entire city (the enemy might be waiting behind them). In contrast, blasting holes in the wall to access adjoining rooms or buildings is not. The preferential use of private rather than public space in combat operations creates another set of singular urban conditions.

A series of drawings document the wealth of the city's unique combat architecture. Each illustration presents a series of architectural designs that share a common context or condition. The drawing of the Ruined City combines small rubble designs, large hydro-mechanical structures, partially damaged homesteads, deconstructed offices and a destroyed multi-storey carpark. Roofless buildings, freestanding façades and paper-thin buildings are some examples of the Staged City illustration. The Vernacular City blends together a great variety of gabled housing models. Container apartments, a cargo hotel and terraced vessels are part of the Recycled City selection. The drawing of the Orientalised City illustrates walled and de-gabled buildings that contribute to the strategic conversion of a vernacular European village into a MENA neighbourhood. The Big City drawing merges towering office buildings with arcaded headquarters, walled governmental offices, security towers and commercial buildings. The assemblage of exemplary buildings in these cityscape drawings are part of an architectural catalogue that captures the range and diversity of building typologies within the city. Small portraits of specific combat building types complete the catalogue of the city's singular simulation buildings.

Fig. 1 Illustration of the city's ruined building typology. The drawing combines the most recurring combat rubble designs in town.



The Ruined City

Ruins are part of war-torn cities. Collapsed buildings, damaged constructions and broken infrastructures transform battered towns in an unpredictable way. Amorphous piles of rubble buildings create disorder and confusion by modifying the city’s topography as well as altering the paths and pattern of movement of its people. Mounds of debris hamper vehicle access, turning streets into precarious footpaths with new, raised vantage points from which to scan the disrupted urban fabric. Where, one might ask, would *The Third Man* be without the piles of rubble in Vienna for Orson Welles, as illegal war profiteer Harry Lime, to slink off over. Chaos, destruction and unpredictable obstacles are essential battlescape elements to practise war. According to English War Studies specialists, soldiers will not fight in empty streets and vacant housing blocks but only amid squalid and bewildering ruins.¹ It is not entirely clear if the representation of destruction in urban combat training is intended to mirror the existing condition of the enemy town; if it anticipates the devastation that will take place once the troops deploy, or if it reproduces the physical results of a battle already fought.

Combat City builds its ruins from scratch. The crumbling walls that comprise the building fabric reveal the purpose-built remnants of a disrupted life. Missing façades and gaping holes expose interiors unprotected by rubble walls. Limits between inside and outside dissolve and redefine the concept of public and private space. There is something disturbing about the starkly exposed interiors of partially destroyed structures. Currently, a quarter of Combat City lies in ruins. Damaged or wrecked buildings, such as the toppled, lopsided tower (Fig. 1, 1) (which may or may not have shifted the floor plates of the building next to it and is itself a mere structural grid) are in high demand as they are a crucial element in the urban combat rubble training programme. In the past, ruins – such as the small freestanding rubble structures that currently plug Combat City’s urban gaps – had been easy to come by. The destruction in urban areas caused by both the shelling, conventional bombing and the fire-bombing of the Second World War generated an infinite supply of ready to use ruins throughout the battle-scarred territory. Post-war reconstruction eradicated most of the rubble buildings, and there was little left to satisfy the growing demand from the training centres that began to proliferate beyond the World War battlefields. Combat City declared ruins to be a priority urban planning issue and no effort was spared to come up with novel rubble schemes. Wreckage surveys, architectural competitions and

¹ Professor Anthony King, *Ruining Copehill Down*, *British Army Review Special Report*, Urban Operations Vol. 2, p. 156, 2019.



Small, rubble single-floor residences in brick (left) and precast concrete.



interdisciplinary discussion groups were held and their findings passed on to a group of technical experts who were to develop the city’s new ruin strategy.

Discussions focusing on how to create the ruins grew heated. Some engineers felt ruins were a natural by-product of military training and recommended the wrecking of existing buildings during exercise raids. They emphasised the importance of “learning by destroying” and insisted that authorised rubbleing was the best way to equip each member of the infantry with an operative understanding of levelling buildings and gaining entry through partial demolition. Rubble, they argued, was also an efficient means to limit enemy movement in the city, in addition to providing the defender with cover and concealment. Commanders, according to the engineers, need to partially rubble buildings to provide greater protection or create unobstructed fields of fire. If the ceiling of a lower storey room can support the weight of the rubble, engineers often consider collapsing the top floor of a building before the battle starts.

Critics of this rubble-as-you-go approach insisted that a series of intensive training courses would leave the troops with rubble piles only, as new buildings could not be erected for every training rotation. Operational problems arising from rubbleing buildings too soon or rubbleing too many were also examined. The resulting loss of defensive locations and the destruction of cover, as well as serious interference with planned routes of withdrawal or counterattack, were defined as undesirable consequences. However, the argument that visibly dampened the prevalent rubble enthusiasm, was not of an operational but of a legal nature. One of the experts observed that while the wreckage of single buildings is permitted on a tactical level by martial law, destruction of entire city blocks would require higher level authorisation. As a result, per current military doctrine, planners must work to preserve the urban environment as best as they can and restrain the urge to rubble buildings.²

The verdict of the city council’s expert planning panel confirmed that building ruins from scratch was a more efficient option than ruining buildings in combat training. Military engineers now face the novel feat of calculating solid and lasting ruins rather than exploiting the material weaknesses of existing structures and planning their destruction. They began experimenting with simple breeze block structures. They designed

² *Field Manual No. 3-06.11, Combined Arms Operations in urban terrain*, G-10 p. 558, Headquarters, Department of the Army 28.02.2002.



Unmarked on maps and largely unnoticed by urban design, architecture and planning communities, Combat Cities have quietly spread throughout the Western hemisphere. *The Complete Guide to Combat City* is an architectural and cultural handbook of these simulated towns, exclusively developed by the military. 17 existing, fully functioning urban combat centres in the US, Europe and the Middle East have been reconstructed from existing video footage, satellite images, military photographs and army suppliers' brochures. The guide evaluates the power of simulation and interrogates whether fake cities can resist or even surpass the comparison with their mirror image. Julia Schulz-Dornburg analyses their features, be they fictional or real, and presents them with commentary, illustrations and classifications. She combines different urban portraits to create a comprehensive catalogue and architectural database of contemporary mock-cities.

