

# Black Flag

*A Coding Club Mission*

By Matt Langley

In collaboration with Chris Roffey



CAMBRIDGE  
UNIVERSITY PRESS

# CAMBRIDGE UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning and research at the highest international levels of excellence.

[www.cambridge.org](http://www.cambridge.org)

Information on this title: [www.cambridge.org/9781107671409](http://www.cambridge.org/9781107671409)

© Matt Langley 2014

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2014

Printed in Poland by Opolgraf

*A catalogue record for this publication is available from the British Library*

ISBN 978-1-107-67140-9 Paperback

Additional resources for this publication at [www.cambridge.org/codingclub-blackflag](http://www.cambridge.org/codingclub-blackflag)

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication, and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

.....

## NOTICE TO TEACHERS IN THE UK

It is illegal to reproduce any part of this work in material form (including photocopying and electronic storage) except under the following circumstances:

- (i) where you are abiding by a licence granted to your school or institution by the Copyright Licensing Agency;
  - (ii) where no such licence exists, or where you wish to exceed the terms of a licence, and you have gained the written permission of Cambridge University Press;
  - (iii) where you are allowed to reproduce without permission under the provisions of Chapter 3 of the Copyright, Designs and Patents Act 1988, which covers, for example, the reproduction of short passages within certain types of educational anthology and reproduction for the purposes of setting examination questions.
- .....

Cover image: ©Tihomir Tikulin, Beehive Illustration Ltd

# ***Acknowledgements***

Nothing can survive in a vacuum, never mind flourish. I am indebted to a lot of very good people who make me look much better than I am, to Stephanie, Kate, Heather, Jennie, Jilly, Jo, Tico, Berenice and my partner in crime, Chris, I couldn't imagine a better bunch of anarchists to have fight the system at my side!



# Introduction

This is not a traditional novel. Matt Langley's *Black Flag: A Coding Club Mission* enables you to take your reading experience a step further by allowing you to interact with the story via the free companion website [www.cambridge.org/codingclub-blackflag](http://www.cambridge.org/codingclub-blackflag).

Computer programmers come in many forms: male or female, young or old, good or evil. When they get started in front of a keyboard their skills can easily look like magic to the untrained eye. However, unlike magic, the knowledge and skills of programming are not cloaked in secrecy, the opposite in fact, they are well within your grasp.

Join the characters in *Black Flag* as they journey through the world that has been forced upon them. The characters have to solve problems, break codes and decipher hidden messages, often under extreme pressure, but they do so with skill, skills that you too can learn and master.

As you read through this novel look out for the prompts for the accompanying website.



Whenever you see this symbol you can join Danni, one of the characters, online to solve coding challenges and take the next step in completing your mission.

Enjoy the puzzles but don't get disheartened if you find them difficult; our characters are not facing easy challenges and neither are you. There will be hints provided to help you along the way. If you get really stuck all of the passwords can be found at the back of the book, but be warned, all of the passwords

are supplied in code: we don't want them falling into the wrong hands. The website FAQ section provides details on how to decode them. Remember, there is never just one correct way of solving these puzzles. In these desperate situations, more often than not, finding a solution, any solution, is all that matters.

Right now though, there is a lot to do and the citizens of New Edgehill are in need of your help. Before we go any further Danni has a message for you and has your first puzzle! Solve the puzzle and obtain your username and password to access the website.



## Hidden Login

Difficulty: ★

*I must keep this short, you can trust us! We know what is going on. To get involved with the movement yourself, you will need to **open your eyes**.*

*Go to the website, you'll find the URL at the front of the book, keep it safe.*

*This is an initiation. I can't take the risk of writing the password down.*

*You have to find it yourself, so think like a true hacker: ignore the visuals and dig into the code.*

*Once you are in, fill in the form; it will allow us to keep track of your progress and provide you with many of the resources and tools that we use to fight against this oppression.*

*Keep safe and good luck!*

Danni





## Chapter 1

0  
0  
0  
0  
0  
0  
0  
0  
1  
It was a black and white world. It didn't matter how many shades of the spectrum coloured it; it would always be black and white. Black and white. Nothing in between. Especially when it came to something like war.

The screen flashed from one conflict zone to another. Cal Jones couldn't tear his eyes away. He wasn't an idiot, but even he couldn't tell them apart. The banner text beneath the pictures

proclaimed exotic locations like New Rio, New Delhi, New York. All places that were bright, shiny and, as their names promised, new. He had heard of them, of course. Who hadn't? But he knew he'd never get to visit them, any more than he'd get to visit places with real history, like Old Lichfield or Old Amsterdam or Old Venice. They were just names to him.

12:59.

In less than a minute the entire city would stop as the clock struck thirteen and the CyberCore International news stream would start, bringing everyone up to date with the latest efforts of the security forces as they moved to protect the borders.

This was Cal's route home. Every day at the same time he stood in the square watching the news stream.

Words scrolled across his brain: *fear, terror, threat, the enemy, out there, always, circling, watching, waiting, trust no one, be vigilant, be a good Citizen*. It was on a permanent loop now. *Fear, terror . . . be vigilant*. Cal had lived with that message all his life. They all had. It was as if the images carried subliminal messages that pumped right into his brain. Around him people began to slow down, taking up positions at the street corner and along the pavement to get a better view of the infoscreens that dominated the huge plaza. Cal gripped the shoulder strap of his rucksack, doing his best to prevent the contents from being squashed in the crush as people jostled for position. No one wanted to miss a thing.

The infoscreen filled with a clock face, its red second hand sweeping round to join the hour and the clock struck thirteen. The street around Cal fell utterly silent; every single car idled as every traffic light turned red for the broadcast. It was as though the entire world held its breath.

'Greetings, Citizens of New Edgehill.' The image of the clock morphed flawlessly into the craggy face of Marshall Trent. He stared down on every centimetre of the city like a god. Cal



thought he looked a little older today, a few more lines round his eyes maybe, a few more creases on his forehead, but he knew that they should all be grateful he was looking after them. The world needed men like Marshall Trent.

‘Today I bring grave news,’ Marshall Trent said, his voice filling their ears thanks to their implants. They were all connected via their Neurochips. A constant ebb and flow of data that transformed humanity into one great hive mind. ‘There has been an attack on our Exploratory Outpost in Bright Town. The extent of the casualties is not known at this time, but an official list will be accessible within the hour. This is the third such cowardly attack in the last month and our heart goes out to those who have lost loved ones in these trying times. But I have a message for these fearmongers, a promise: we will find you and you will be brought to justice. We shall not rest until every last one of you is in custody. We shall not sleep until peace is restored. You have our word. Your days are numbered.’

There was silence as Trent’s promise filtered through the crowd. Cal saw the adoration in his fellow pedestrians’ faces as they gazed up at the screens all around them. Marshall Trent was watching over them. Marshall Trent would keep them safe.

‘War continues to rage in many Communities of the world,’ Trent continued, ‘and while our troops stand by in readiness I will not needlessly put the lives of our brave young men and women in danger. We will not intervene unless given no choice. Sadly, I fear that our enemies intend to force our hand. I want each and every one of you to know that when the time comes we *will* fight. But more than that, we will win.’

Around his face, the earlier images of conflict were repeated, but instead of New Rio, New Delhi and New York, this time they were places Cal recognised, battle-scarred but unmistakable. ‘These are landmarks we love and cherish,’ said Trent. ‘These are the places we will defend. Be vigilant.’

You never know where the threat lies. It could be someone you know. It could be someone you love. It could be someone standing beside you. I want you to look at the person standing next to you right now, I want you to look at the person sitting in the cubicle alongside you, at the cash register in front of you. I want you to look to your neighbour. I want you to remember that where we feel safe, where we think we are surrounded by friends and loved ones, is where we are most vulnerable. We let our guard down. We give our enemies a place to hide close to our hearts. That is the ugly truth. Trust no one.'

Cal was all too aware of people turning their heads, looking suspiciously at each other. More than a few eyes stared at him. He felt his heart rate quicken. His eyes darted over the crowd. Surely it wasn't just because he was the youngest? Or maybe it was. He had done nothing wrong. But even so he held his bag tight, certain that someone was going to try to take it from him, demanding to know what was inside. He licked his lips. He could feel a bead of sweat trickle down the back of his neck.

'We have images of this morning's attack on the outpost –' And before anyone could look away the screen shifted to show a smoking building. It was impossible to tell what the damage was, or what had caused it. Cal stared at the ruin, shaking his head. How was he supposed to work out anything about the building from the picture? How were any of them meant to know where it was or what went on within its four walls? They only had Marshall Trent's word that this was the Exploratory Outpost in Bright Town. But that was enough. Trent would never lie to them.

'This was not the work of foreign agents. A group who call themselves the New Luddites were responsible for this cowardly attack. They want to destroy everything we have worked so hard to recreate after the Last Great Civil War. This is why I urge you to look closely at your friends and neighbours. This

is why I urge you to look for any change in their behaviour, anything that might be deemed suspicious or out of character. Any clues to what they are thinking or planning. You might be the difference, my friends. Do not let these Anarchists destroy everything we have built.'

There was a collective gasp from the crowd as the picture changed to show a teenage boy lying on the ground.

The shaky camera moved closer.

A hand entered the shot, turning the boy's head to one side to reveal the extent of his wounds.

Cal did not know what shocked him more: that this boy might be dead or that someone had tampered with his Neurochip.

He touched his own ear. All around him others were doing the same. Of all the rules, of all the laws they lived their lives by, all the regulations that helped to keep their lives in order and kept them safe, one was sacrosanct: no one tampered with their Neurochip.

'These people flout the law,' Trent said, the anger in his voice barely disguised. 'I am urging you, my people, my *friends*, be vigilant. Watch for aberrant behaviour. Watch for people acting out of character. Watch for stray words that may give them away. Different is wrong. Remember that. We are a society. That means we are together. We are the same. Always. Alone we are weak. Together we are strong. Together we are *safe*.'

The screen showed another building, which could have been any building in any new town, though this time angry flames licked through its broken windows and black smoke poured out. The image flashed again, bringing up the image of the wound on the boy's neck. The message was clear. These people were capable of the unthinkable. They must be stopped.

The silence that had accompanied the news stream was quickly replaced by the hum of chatter as people realised that it was over.

In his head the war had always been happening somewhere else; the devastation was always an image on the big screens of some distant place, but it was obvious the threat was ever-present and closer than any of them wanted to admit. It could come to New Edgehill at any time. He'd grown up being told it was possible to be standing next to the enemy and not know it. That was how the Net Law worked, it relied upon people like him turning on their friends and neighbours and giving them up to the Enforcers. Cal was seventeen years old. In that time he'd come into contact with a lot of people. He had no way of knowing how many, but surely he must have encountered Anarchists hell-bent on bringing down Marshall Trent and ending his peace? That was Trent's message, wasn't it? They had all met Anarchists even if they didn't recognise them.

Cal turned away from the infoscreen and began to push his way through the dispersing crowd. Many of them wore the same stunned expression and seemed unable to move until the growing growl of the traffic meant that life was reasserting itself and they had no choice in the matter. Cal gripped the shoulder strap of his backpack and squirmed and wriggled and ducked between people, head down, until a huge roar of sound stopped everyone dead in their tracks again.

There was a moment of silence in the wake of the explosion where nothing existed, no sound, no air, nothing, and then the screams came.

Cal felt a rush of heat across his face as he looked up.

All around him people were panicking, pushing to get out of the square, anywhere away from the source of the explosion. They didn't know what it was or where it had happened. It didn't matter. It was close. It was enough to have them pulling and clawing at each other to get through gaps that weren't there. Car horns blared. Engines roared. And more screams. Always more screams.

Cal's head was spinning. He struggled to locate the source of the panic, but was caught in a tide of bodies that dragged him further away. Instead of going with them, he stood his ground, twisting and turning to let people surge round him like a rock at the bottom of a rushing river. His bag was torn from his shoulder. He barely managed to snatch it back before it was carried away in the press of people. Cal clutched it to his chest.

'Stop her!' someone shouted.

Cal couldn't see who had called out, or who they wanted stopped. He wasn't a tall boy. Sometimes that was a good thing, it meant he could slip by unnoticed when he wanted to, but at times like this it was a distinct disadvantage.

Space opened up around him. He saw corn-yellow hair streaked with a blaze of purple: a girl running flat out, weaving through traffic to a chorus of horns and screeching brakes. Judging by the trail of anger and confusion trailing in her wake, the girl had come from the Watchhouse on the far side of the plaza. She jumped, barely hurdling the wing of an Enforcer before it ploughed into her, and she came down on the bonnet and rolled away, on her feet again and running before the car had stopped moving.

Then Cal saw the Enforcer on her tail, its stun baton ready to strike her down. Cal could feel the sense of hunger from the crowd . . . they wanted this girl to pay for what she'd done – it didn't matter that they didn't know what she'd done, if anything. The Enforcer was chasing her. She was running. She must be one of the familiar enemies Marshall Trent had been talking about, the enemy within. Cal was frightened for her. There was no way this was going to end well.

She was no more than ten metres away from him when they made eye contact.

He realised two things. She was young, younger than him, probably a couple of years younger, though it was hard to

tell through the blackened soot smears on her face. And she was scared.

As she bolted away from him the girl cast a frightened backwards glance at the Enforcer, and as she did her hair fell away from her neck and Cal saw an angry red smear of blood behind her ear where her Neurochip should have been. She was one of them.

The girl stumbled and for one sickening second Cal thought she was going to fall in front of the next car, but she sprang up, planting her hands on its bonnet and used it like a vault, her momentum carrying her up and over the front of the car.

The gymnastic manoeuvre left the Enforcer on the wrong side of the vehicle. It slammed into the side of the car, pushing it aside as though it wasn't there and went on relentlessly.

Cal had never seen an Enforcer in action, and given the way it had just brushed a ton of metal aside he hoped he'd never need to again. It closed the gap on the girl in the silence between two of Cal's heartbeats – it was that *fast*.

The Enforcer raised its baton and swung down hard. It was a stun baton, so it didn't need any power behind the swing, but the droid had chosen deadly force over simply stunning the girl. The impact would shatter her skull.

Without thinking Cal threw his backpack, its trajectory putting it between the girl's head and the Enforcer's lethal blow. The bag took the full impact of the droid's swing. He felt a sizzle of energy as a jolt of electricity ripped out of the baton and seared through the backpack, burning up his arm to his shoulder. The shock sent him spinning. By the time he'd caught his balance the girl had swept the legs out from under the Enforcer and scrambled back to her feet, leaving it flailing around on its back like an upended turtle.

Some of the Citizens had shaken themselves free of the shock and formed a vigilante wall.

Cal realised what he'd done. She was an Anarchist. He'd saved an Anarchist's life. But as he looked at her, all he saw was a girl. Marshall Trent's words about familiar enemies rang in his ears as the crowd closed in on them, made brave by the fact the Anarchist was only a girl. Even though they didn't know what she'd done they weren't about to let her escape. Cal stood between them. The way they looked at him was frightening. There was so much hate in their eyes. Cal's mind was racing. He'd risked his life to save her. She was an Anarchist. That made him one too, didn't it? He'd broken the order of Marshall Trent's peace. He'd prevented an Enforcer from bringing an Anarchist to justice. That's why they looked like they wanted to tear into him like rabid dogs.

'Run!' the girl screamed at Cal.

She didn't wait for him.

