

# Zimbabwe 2018 Elections

## Biometric Voters' Roll Analysis

A report by Team Pachedu

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# 1. Introduction

In two weeks' time the nation of Zimbabwe is heading to an election which is unique in many ways -- most notably because Emmerson Mnangagwa and Nelson Chamisa are competing for the first time having replaced Robert Mugabe and Morgan Tsvangirai respectively. It is also an election where a new voters' roll has been prepared through what is termed Biometric Voter Registration (BVR) exercise. This entailed members of the public giving their fingerprints and facial photograph as a means of identification. It should be noted that the BVR process was only meant to register prospective voters, voting in itself is not going to be through the use of biometrics but the old fashioned paper checking and fingers marked with indelible ink. In previous elections the voters' roll has been an area of significant contestation with allegations of rigging through the use of ghost voters or people who had died. It is no wonder there is a lot of keen interest around the voters' roll to be used in the 2018 elections.

In an ideal world, we should all be confident that the Zimbabwe Electoral Commission (ZEC) has done impeccable work -- however it has been met with suspicion. The opposition had requested for the biometric information to be audited independently; this was rebuffed by ZEC. The Commission chairperson advised that anyone who wanted to audit the voters' roll was free to do so at their own cost after the final voters' roll was availed to political parties. Another request from the opposition political parties was access to the servers where the biometric information was kept, this too was declined by the Commission citing security of the sensitive data.

Some of the history to these demands comes from the 2013 election when opposition political parties were not given access to an electronic copy of the voters' roll before the election. After being soundly beaten at the polls the opposition expedited the request for an electronic copy through a court case already lodged before the election but the Registrar General Tobaiwa Mudede and ZEC would not make it available [citing a computer problem](#) that rendered the information inaccessible. The electronic copy of the 2013 roll was never made publicly available leaving the opposition to make do with hard copies that were not easy to analyse. The hard copy was only made available on the eve of the election.

While the demands by opposition political parties might seem excessive, they are not without cause. Zimbabwe comes from a history where the electoral bodies have not covered themselves in glory. In 2008 the Zimbabwe Electoral Commission withheld the presidential election results for well over a month eventually announcing results where there was no clear winner, taking the nation to a runoff election. Time might have moved on but the Zimbabwe Electoral Commission still has the same faces at the helm, Utoile Silaigwana, whose role in elections goes back to the days of Electoral Supervisory Commission (ESC) with Lovemore Sekeramayi (late) is now acting Chief Elections Officer. A retired Zimbabwe National Army Major, he is widely perceived to be loyal to the establishment. He oversees the powerful Operations of Zimbabwe Electoral Commission or National Logistics Committee. While the newly appointed Priscilla Chigumba is the chairperson, Utoile is the man who understands the system from the ground up. In this context the clamour by the opposition political parties for more transparency make sense. While the Zimbabwe Electoral Commission is keen to fulfil the letter of the law, given their history they should also consider its spirit. They must go the extra mile to win the support of the public.

It is these underlying concerns that resulted in the calls for an audit of the voters' roll. When it was offered to members of the public at a fee, many rushed to buy so they could see for themselves. This is how Team Pachedu was born; a group of individuals keen to combine their efforts into exploring the voters roll. Team members come from a myriad of backgrounds consisting of, but not limited to, human rights experts, electoral experts, political analysts, computer programmers, data scientists, linguists & bio-statisticians. It was a case of people attracted to one another for a worthy cause. Working independently the team members had to multitask, work mostly at night and strike a balance with daytime jobs and other obligations.

The work of the team entailed putting the data to the test, using available information for checking and comparison. Multiple exploratory & confirmatory approaches were used. The team has been careful to ensure the findings are replicable, based on scientific methods. We are cognisant of the charged environment into which our report is released. We have tried as much as possible to present a factual analysis of the voters' roll. We believe our work sets the foundation for a better electoral system, fostering an environment where people argue from a perspective of understanding the issues. We believe that knowledge built around facts leads to better decision making,

judgments and works to prevent misguided notions. If there is anything Team Pachedu would want to be remembered by, it is creating a foundation for a better electoral environment.

To understand the issues we had to consult statistics of Zimbabwe's population, understand the system around which the Identity system of Zimbabwe was built, consult the voters' rolls used in the previous elections and understand how the country is subdivided into different districts. We are eternally grateful to the men and women who made the 2008 and 2013 voters' rolls available for a comparison. We also would like to thank the people who collaborated with us, volunteering to do the proofreading, checking for errors and guiding us on how to present our analysis as succinctly as possible. To the fans we grew in a short space of time, you gave us the zeal to continue working deep into the nights. You are the real owners of this work. We do not want you to just read it as something pertaining to the 2018 elections but as a foundation of citizen engagement and participation. You are all Team Pachedu. We are all Team Pachedu. When you are done reading this report, put Zimbabwe in the heart of the matter. There is no limit for an inspired people, we are our own limitation towards greatness, where Zimbabwe goes, it is up to us, we are the people.

## 2. Executive Summary

This report is based on the work of a team of volunteers concerned about the robustness of the electoral roll and the quality of Zimbabwe's upcoming election. The report provides details of our analysis of the Voters' Roll released by ZEC on 18 June 2018.

This short time frame gave independent analysts very little time to complete a comprehensive audit, much less to provide ZEC with necessary corrections. As a result, it is important to note that our findings as detailed in this report may not reveal the full extent of discrepancies. There are additional areas which we were unable to explore. We hope that our findings will prompt other analysts and political parties to expand their own audits and verify our work.

The information we have provided in this report and subsequent lists which have been forwarded to ZEC are accurate to the best of our knowledge and ability. We leave it up to ZEC, Political Parties and Citizens of Zimbabwe to decide what to do with this information. We hope that Zimbabwean citizens will take note of the concerns expressed in this report and act accordingly to ensure a free, fair and credible election.

### **Key findings:**

Through analysis of the roll, rolls of past elections and other relevant data we have identified 250,000+ records which raise concern because of inaccuracies or duplication. These are outlined below and discussed in detail in the subsequent sections of this report.

### **These include the following:**

Records with inauthentic ID numbers:	2
Records with Duplicate ID numbers:	81
Records with Invalid ID numbers:	3,799
Statistically improbable Surname & ID Combination	122,788

Records with perplexing ID numbers:	15,000
Records with same name, DOB:	4,983
Records with extreme age anomalies:	4
Records with address anomalies:	2,083
Records assigned to incorrect districts:	>54,000
Records with people relocated:	22,516
Records added after 1 June:	11,770
Unique surnames:	>50,000
Records copied from 2013:	>100,000

### **Narrative summary:**

Sections **3** and **4** explain the terms used in the report, and the method by which Zimbabwean National IDs are generated.

In sections **5**, **6** and **7** we detail our findings concerning *invalid*, *inauthentic*, and *duplicate* ID numbers recorded in the data. It is of great concern that these were not identified by ZEC before the roll was released.

In section **8** we discuss *perplexing* ID numbers. These include a large number of registered voters whose IDs are either inauthentic or which indicate that the Registrar-General's office has departed from how ID are understood to be issued.

Sections **9** and **10** detail apparent *duplicate* records: **4,983** people who ZEC would have us believe are different people, despite having the exact same first name, surname and date of birth with most also having the same gender. That is, these people have different ID numbers, but their other personal details are duplicated.

Section **11** identifies a *statistically improbable* number of registered voters with identical middle ID numbers and surnames. We found **122,788** cases like this; **74,932**

of them have matching prefixes and suffixes in the ID numbers (i.e. where the code of the district they registered in is the same as their originating district) .

Section **12** explores *anomalies* related to age as recorded on the roll. These identify underage voters whose records were not identified by ZEC. It also identifies a number of other anomalies, which raise particular questions, especially when compared with data for the same voters in previous elections.

Section **13** explores the address data. Many addresses are *unclear or inconsistently recorded*. This raises difficulties for ZEC and other auditors in checking the data. It also raises questions about how they were allocated to polling stations and constituencies, with voters who appear to be close neighbours allocated to multiple constituencies, and numerous instances where voters within the same residence are assigned to different wards and constituencies. More worryingly, the analysis also identified a number of fictitious or ghost addresses - addresses which cannot be found, but at which multiple voters are registered.

Section **14** identifies *relocated voters*: a concerning pattern when polling stations have been split or merged and voters relocated. The newly released lists of polling stations, and the number of voters registered at them, omit at least **5,082** voters who had previously been allocated to polling stations. It is not clear if they have been moved to a different station or omitted entirely.

Section **15** compares records on the 2013 voters' roll with the 2018 roll. Our team found strong *evidence to suggest that potentially deceased voters were copied from the 2013 voters roll to the 2018 voters roll with changes being made to their ID numbers and in some cases their other details*. This copying and modifying has left remnants of evidence in the 2018 voters roll which is further detailed in this report.

Our conclusions and recommendations are provided in Sections **16**. We conclude that the voters' roll ZEC has released to the public contains anomalies that make it unfit for use in the upcoming 2018 Harmonized Election.

**It is our recommendation that the election to be held on 30th July 2018 be postponed pending resolution of the issues identified in this report, and others that may be identified elsewhere.**

Further documentation is provided in our supporting files.



### 3. Glossary:

**BVR:** Biometric Voter Registration also synonymous with the voters' roll produced after the registration exercise.

**Details:** Refers to Voter information such as Surname, Forename, ID Number, Gender, Voter Address. Details generally do not include polling station, district, ward and province data.

**Duplicate ID:** Refers to an ID number that is exactly the same as another ID number.

**ERCZ:** Refers to the Election Resource Centre Zimbabwe which is a think tank and advocacy organization on electoral and democracy issues in Zimbabwe. ([www.erczim.org](http://www.erczim.org))

**Ghost:** In the context of this study, the definition of a ghost voter is taken to mean a voter whose details appear not to be in order, or are reproduced elsewhere with slight variation for ID number, Date of Birth, first name or last name, as well as other anomalies. Ghost voters are comprised of, but not limited to, duplicate records, in part and in full, along with contrasting registration details with prior registration records, based on the 2013 and 2008 voters' rolls. It is beyond the scope of this study to assess whether the flagged suspected ghosts would be used fraudulently or not, as a means to cast illegal votes. With this in mind, the ultimate goal of the study was to identify all suspect registrations, based on the exploratory and confirmatory analysis and criteria explained below.

**Inauthentic ID:** Refers to an ID number where the first 8 or 9 digits are not unique and does not appear to be authentically issued by a Registrar General's office.

**Invalid ID:** Refers to an ID number that does not pass the MOD23 Test or contains a code of origin that does not exist in Zimbabwe.

**MOD23:** Refers to the Modulus23 calculation which is applied to the first 8 (or 9) digits of a Zimbabwean ID Number in order to generate a check letter. The calculation is explained in Appendix 2.

**Perplexing ID:** Refers to an ID number that does not seem to have been issued yet by the Registrar General's office.

**RG's Office:** refers to the Registrar General's Office which is responsible for generating and issuing ID numbers to Zimbabwean Citizens. ([www.rg.gov.zw](http://www.rg.gov.zw))

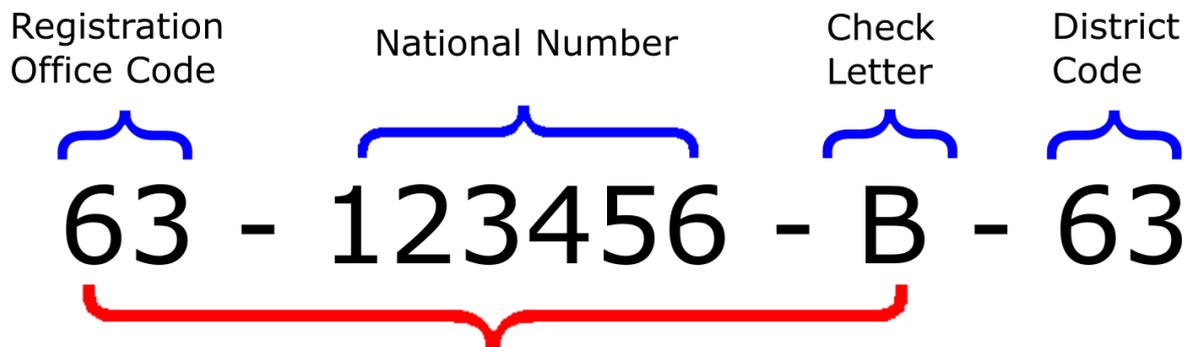
**Record vs. Voter:** While we have attempted to be consistent, it is very easy to slip in between using the words “record” and “voter” interchangeably. We have not used the perhaps more accurate word, “tuple,” or the word “row.” The voters’ roll is composed of a series of fields, individual cells, representing information such as name, date-of-birth, address, & etc., with each row making what is called a record, assigned to one voter. Unless explained otherwise, a record represents a voter, and vice versa.

**ZEC:** Refers to the Zimbabwe Electoral Commission - an independent body which is constitutionally mandated to handle elections and referendums in Zimbabwe. ([www.zec.org.zw](http://www.zec.org.zw))

**ZESN:** Refers to the Zimbabwe Election Support Network whose major focus is to promote democratic processes in general and free and fair elections in particular. ([www.zesn.org.zw](http://www.zesn.org.zw))

## 4. Understanding the Zimbabwe National ID Number

In order to properly analyse the voters roll, it's important to understand how ID numbers in Zimbabwe are generated.



Check Letter is generated based on a formula that is applied to the National Number.

This image shows an example of an authentic Zimbabwean ID number.

The Registration Office code is unique to every Registrar General's Office. Someone who wanted to maliciously change ID numbers on a voters roll would be able to manipulate the prefix to a certain extent. In the example above, "63" represents the RG Office in Harare. A list of Registrar General Office codes and District codes appear in Appendix 1.

The National Number is sequential in each Registrar General office. Different RG Offices (with different office codes) can issue the same National Number, but the same RG Office cannot issue the same National Number more than once. For example, the RG office in Harare (63) can issue 63-123456 only once. The Bulawayo RG office (08) can issue 08-123456 only once. While the example above has 6 digits before the check letter some National Numbers have 7 digits before the check letter. This combination of RG office codes and sequential National Numbers makes the first 8 (or 9) digits of every ID number unique. Someone intending to manipulate ID numbers would have to change the Registrar Office Code, National Number and re-calculate the check letter.

The check letter is generated based on a specific formula, known as the Modulus23 Calculation, which is applied to the Registration Office Code and the National Number. The formula for this calculation is explained in Appendix 2. It's important to note that the Registration Office Code, National Number and Check Letter cannot be changed without compromising the authenticity of the entire ID Number.

The last two digits represent a District Code. District Codes are the same as Registrar General Office codes. District Codes are inherited from your father and enable a person to trace their ancestry. In the example above, 63 at the end means this person's father and possibly forefathers originate from Harare. This code is the easiest to manipulate without compromising the authenticity of the ID number, but when compared alongside last names and known father-child relationships, changed ID numbers can be identified.

## 5. Invalid ID Numbers

Using what we know about Zimbabwean ID numbers, we scanned the entire list of 5,683,936 ID numbers in the 2018 Voters' Roll and found only one number that did not pass the MOD23 test:

Surname	Forenames	ID Number	Gender	Date of Birth	Voter Address	District	Province
MUZOTA	FINIAS	03-446236-Z61	Male	02-Jun-1947	Manemwe Village, Chief Nyamukoho, Mutoko	Mudzi	Mashonaland East

This table shows the only ID number in the 2018 Voters Roll which did not pass the MOD23 Test.

In order for this ID number to pass the MOD23 Test, the Check Letter should have been "H" instead of "Z". We suspected that this was probably a typing error, so we searched the 2013 Voters' Roll to see if we could find a previous record of this voter. Our suspicions were confirmed:

Surname	Forenames	ID Number	Gender	Date of Birth	Voter Address	District	Province
MUZOTA	FINIAS	63-446236-Z61	Male	02-Jun-1947	Vill Manemwe, CH Nyamukoho, Mudzi	Mudzi	Mashonaland East

This table shows the same person as taken from the 2013 Voters' Roll. Note (63) changed to (03) in the two rolls.

When we calculated the check letter based on the 63- prefix, we found that the correct check letter was "Z". An electoral officer more than likely made a data entry error on the 2018 Voters' Roll, meaning this person may well be turned away on voting day.

All other ID's in the 2018 Voters' Roll passed the MOD23 test, but this does not mean that all of them are authentic and belong to real people (alive or deceased).

We found another ID Number that contained a fatal flaw: There is no district 93 in Zimbabwe.

Surname	Forenames	ID Number	Gender	Date of Birth	Voter Address	District	Province
Sibanda	Sifiso	08-684093-F93	Male	14-Apr-1974	House Number 70169/2, Lobengula, Bulawayo	Bulawayo	Bulawayo Metropolitan

This table shows an ID Number that has an invalid code of origin.

We wondered if ZEC had actually put any measures in place to detect ID Numbers that didn't conform to the rules outlined in Section 4. Digging deeper, we found a large number of ID numbers that broke even more rules as shown in the subsequent sections.

## 6. Duplicate ID Numbers

Searching the voters' roll for exact duplicate ID Numbers was one of the first processes which we ran, not expecting to find any. We found that 40 ID numbers had been duplicated, resulting in 81 records. One ID number was duplicated three times. A sample of our findings appears below:

Surname	Forenames	ID Number	Gender	Date of Birth	Voter Address	Constituency	Province
Masoha	Emmanuel	27-089367-N27	Male	19-Jan-1971	House No 4545, Nketa 7, Bulawayo	Nketa	Bulawayo Metropolitan
Masoha	Emmanuel	27-089367-N27	Male	19-Jan-1971	House Number 4545, Nketa 7, Bulawayo	Nketa	Bulawayo Metropolitan
Nechiro ngwe	Liberty	07-159132-P07	Male	10-Apr-1986	Zivanayi Village, Headman Mushumba, Chief Nyashanu	Buhera South	Manicaland
Nechiro ngwe	Liberty	07-159132-P07	Male	10-Apr-1986	Mangwengwende Village, Chief Gwebu	Buhera West	Manicaland
Bvoro	Simon	07-159132-P07	Male	10-Jul-1986	House No 1883n, Epworth, Harare	Epworth	Harare Metropolitan
Sachiwo	Fortunate	63-1629311-Y34	Female	09-Jun-1987	House Number 1447, Retreat Farm, Harare	Harare South	Harare Metropolitan
Chamut sanga	Lydia	63-1629311-Y34	Female	20-Oct-1985	Nyabanga Village, Headman-Ganje, Chief-Sawunyama, Nyanga	Nyanga North	Manicaland

This table shows a sample of ID numbers that are exactly the same. In some cases other details are different.

The full report with our findings is included in our supporting files (Duplicate ID Numbers).

### Note the following points:

- The first case shows the same person, Emmanuel, with 2 records: same address that has however been entered in slightly different ways (House No / House Number). This non-standard address system makes searching address data extremely difficult for a computer. It's also interesting to note that this person, with the same address was assigned to two different polling stations: (0801BYO2502 - Childhood Centre Pre-School) and (0801BYO2504 A - Manondwane A Primary School) respectively. Despite ZEC's assurances to the contrary, these duplicates are on the voters' roll.
- The next case shows three records, two of which have the same surname, forename and ID (Nechirongwe, Liberty) but different constituencies. In the next

instance the surname and name are entered as Simon Bvoro, whose ID number is the same as Liberty Nechirongwe. Simon Bvoro is registered in Epworth, Harare. Curiously all three have a date of birth occurring on the 10th day of their respective months and years. These were certainly not the typical typographical errors we expected and we wondered how these anomalies escaped the robust deduplication process. (Justice Chigumba, Chairperson of ZEC had previously been quoted saying they had removed duplicate ID numbers used by multiple people to register and were even considering legal action against these people).

- The last case is of two females, with different names, who appear to share the same ID number. One is a registered voter in Harare South constituency while the other is in Nyanga constituency, Manicaland province. It should not be possible for two individuals to hold the same ID number.

We later found further discrepancies, such as the one below:

Surname	Forenames	ID Number	Gender	Date of Birth	Voter Address	District	Province
Chikerema	Chandiwira Azaria	83-001850-B83	Male	10-Oct-1942	House No. 705; Mangwengwe Road; Tshovani	Chiredzi	Masvingo
Chikerema	Chandiwira Azaria	83-0018850-B83	Male	10-Oct-1942	Chirikure Village; Headman Mawadze; Chief Bota	Zaka	Masvingo

This table shows a duplicate record where an additional number has been added to the ID.

Our initial software did not detect this duplicate because we were scanning for exact matches. However, notice that the first record in the table above is a 6-digit National ID Number and the second record is a 7-digit national ID number. Both these National ID Numbers look strikingly similar – except that an additional “8” has been appears in the second record.

**This raises the following questions:**

1. If this is a typing error in the ID number, is it possible that many other people’s ID numbers have been mistyped?
2. Is this the same person who transferred his registration to another area? If it’s the same person, why did the AFIS software not remove this duplicate based on the fingerprint data collected?

3. Is it possible that two different people with the exact same Surname, First Name, Second Name and Date of birth can have ID numbers that are so similar and be born on the same day in the same province?

Our analysis was not able to determine the full extent of these sorts of duplications because the ID numbers are essentially different.

In this category we also found records which seemed to be the same person with different genders and other records which seemed to be the same person with different dates of birth. However, most records in these results seemed to be duplicates.

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## Engaging with ZEC

In April 2018, ZEC released an update regarding the Biometric Voters' Roll. One of the points in the release (point number 3) read as follows:

*“The Commission is currently correcting data entry errors made by the Voter Registration Officers. Examples of the errors found in the data cleaning exercise include voters assigned to the wrong polling stations, duplicate IDs and typographical errors”*

Release note point numbered as 4 read:

*“BVR is a method of registering voters which encompasses capturing of demographic, biometric and delimitation data. The Commission will use the Automated Fingerprint Identification System (AFIS) to identify multiple registrations. All records identified as duplicates will undergo an adjudication process to analyze and deliberate on the action to be effected.”*

The press release is included as a separate attachment with this report (BVR Update Press Release).

We sent a small brief of our findings to a reporter at the Newsday in Harare. [The article](#) caused public outrage and prompted ZEC to issue a statement on 12 July 2018 in response to the article. In the response, ZEC quoted the first example in the Newsday article and said:

*“In one of the cases cited by a local daily, the Automated Fingerprint Identification System (AFIS) picked that Chikondowa Varaido, registered three times giving three different places of residence. In the first entry she registered on 15 December 2017 and was allocated Chirovakamwe A Primary School polling station in Ward 14 of Mutare Municipality. On 29 May 2018 she again registered giving proof of residence close to Mutare Junior School polling station in Ward 11. Her third registration was on 31 May 2018 where she was allocated a polling station at Hillside Sports club in Ward 12 of Mutare Municipality. Her entries recorded on 15 December 2017 and 31 May 2018 have been removed from the final voters' roll leaving the 29 May 2018 record only. Her records that were removed from the roll will be on the exclusion lists for Chirovakamwe A Primary School polling station and Hillside Sports Club polling station.”*

A copy of the full statement is available as a separate file attachment with this report.  
(ZEC Dismisses Ghost Allegations)

**We would like to bring public attention to the following:**

1. Why did ZEC remove the 31 May 2018 record when that was her third and final registration? Is it possible that she really did move houses three times, changing her registration three times? Why would ZEC keep the registration from 29 May 2018 when it was superseded by the 31 May registration?
2. Each of our team received the Final Voters' Roll from ZEC at different times (ZEC issued a statement that the roll was available on the 15th of June, yet no one actually got access to it until the 18th June - Release included as separate attachment - Voters' Roll Released). We all checked our copies and found the same thing: two records for her ID number (07-143353-N07): One record was registered at “HOUSE NUMBER 5095 AREA 13, DANGAMVURA, MUTARE” and the second record (duplicate) was registered at “HOUSE NO. 25, KINGFISHER STREET, GREENSIDE, MUTARE”. Anyone with access to the voters' roll can check and find these duplicate records.
3. We were fortunate that their official statement was issued in time to be included in our report. If the voters' roll which ZEC checked before issuing their statement is true, does this mean the copy they issued to each of our team members was not the final voters' roll? Why does ZEC only have one record on their Voters' Roll while every one of our team members confirmed that our copies have duplicate records? ZEC insists

that the AFIS software removed her duplicate records based on biometric data. Why are they still on the rolls released to the public?

## 7. Inauthentic ID Numbers

Knowing how Zimbabwean ID Numbers are generated, and knowing that the Registration Code plus the National Number of an ID **must** be unique, our team tested for duplicate records again, ignoring the suffix. We found **3,799** records where these two parts were exactly the same - this should not be possible. When we compared the voters' details, our findings became more surprising:

Surname	Forenames	ID Number	Gender	Date of Birth	Voter Address	District	Province
Tima	Sharon	63-152181-Z75	Female	1-Sep-1995	F14 NO 3, MANYAME AIRBASE	Harare	Harare Metropolitan
Musingarwari	Clapous	63-152181-Z26	Male	25-Apr-1955	Gaza, Chisina, Njelele	Gokwe South	Midlands
Chiremba	Rosemary	63-300720-E38	Female	23-Aug-1956	Munyengerwa Village, Chief Chiweshe	Mazowe	Mashonaland Central
Chiremba	Rosemary	63-300720-E27	Female	23-Aug-1956	Manjeru Village, Chief Bota	Zaka	Masvingo
DUBE	SIMBISAI	03-043679-W03	Male	12-May-1966	STAND NO 20071, STONERIDGE, HARARE	Harare	Harare Metropolitan
BANDO	SIMBISAI	03-043679-W48	Female	12-May-1966	HOUSE NO. 1961 ZBS, VENGERE SUBURB, RUSAPE	Makoni	Manicaland

Inauthentic ID Numbers: National Registration Numbers issued from Harare (63-) RG office should be sequential, NOT identical.

Note the following about the randomly selected records in our sample table:

- In each set of duplicates, only the District Of Origin has been changed in the ID Numbers. Remember that the check letters cannot be easily manipulated without compromising the authenticity of the ID Number. Manually manipulating any other part of the ID means that the check letters have to be manually recalculated as shown in Appendix 2.
- In the first 2 records, there are no similarities between the details. These two people appear to be completely different people from different parts of the country.
- In the second 2 records, most of the basic details are the same (Surname, Forename, Gender, Date of Birth) while other information has been changed. If this is the same person who transferred their registration, why did the AFIS software not detect duplicated Biometric Data?

- The last two records are more peculiar. Some details are the same (Date of Birth, Forenames) and other key details are different (Surname, Gender).

Some ID numbers have an extra digit (meaning the first 9 digits need to be unique). We tested all these also and found similar findings as described above. These findings are included in our supporting files (Inauthentic ID Numbers).

**It is important for readers to understand that these ID numbers cannot be authentically issued. Two or more people obtaining their ID Documents from the same Registrar General office CANNOT have the same national number.**

Imagine a scenario where John Doe gets his ID from the Harare Office (63-123456-B00) and the very next person in the queue is Jane Smith (who has also inherited the 00 suffix from her father) and the RG office gives her an identical national number (63-123456). They both end up having the same ID number because the code of origin is inherited and beyond the control of the RG Office.

We cannot stress this point enough because the confusing samples above pose two questions:

1. Has the Registrar General's Office been issuing duplicate National Registration Numbers if these are genuinely registered voters with genuinely different biometric data?
2. Has someone manually and purposefully manipulated some of the ID numbers in the 2018 Voters' Roll if the Registrar General's Office has not issued duplicated National ID Numbers, resulting in remnants of evidence left behind?

Both of the questions above pose a serious threat to credible elections. If we have found genuine typographical errors in the ID Numbers of genuinely registered voters, will ZEC turn these people away? If they won't be turned away because the error is minor, what happens to the almost four thousand cases above? Will some of them vote twice?

The following table outlines some (not all) of these anomalies we found and where:

Registrar Office Name	Registrar Office Code	Number of Inauthentic IDs Found
<b>Mberengwa</b>	03	24
<b>Bulawayo</b>	08	164
<b>Kadoma</b>	24	202
<b>Kwekwe</b>	58	104
<b>Harare</b>	63	266

Small Sample of number of inauthentic ID's we found on the voters' roll issued from various RG Offices

The full extent of our findings has been included in our supporting files (Inauthentic ID Numbers).

We can no longer ignore our concerns that someone has manually and purposely tampered with the voters' roll by adding potentially fake records. Further perplexing evidence is outlined in the next section.

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### Engagement with ZEC on this matter

We shared some of our findings in a [Newsday article](#):

On 12 July 2018, ZEC released a press statement dismissing the alleged duplicates (ghosts). Part of the statement reads:

*“Contrary to the press report which alleged that the AFIS software was not reliable, it should be noted that the above anomaly and numerous others were identified by this technology which has assisted the Commission to produce a clean voters’ roll.”*

In ZEC’s press release, the next paragraph went on to say:

*“In the second case the daily alleged that one person by the name of Miria Gondo registered to vote twice at Chikuku Primary School [using ID number: 04-036321-E21] in Bikita and at Boora Primary School [using ID Number 04-036321-E04] also in Bikita in Masvingo. Although records of the voters’ roll show that both entries show the same name and date of birth, the ID numbers have different suffixes. The photographs and fingerprints of the two entries are also different proving that these are two different*

*people who could not be identified by the AFIS technology as one person because their biometrics are different”*

Either ZEC is ignorant about the way Zimbabwean ID numbers are generated, or they are purposefully trying to mislead the general public. Just because the suffix (which is inherited from your father and out of the control of the RG office) is different, does not make the entire ID number different. The examples above are the exact same ID number. The refusal by ZEC to allow political parties to get access to the biometric data and photographic data collected during registration raises further questions about the authenticity of the voters’ roll and whether biometric data is actually available for all 5.6+ million registered voters.

A copy of the full ZEC press release has been included as a separate attachment (ZEC Dismisses Ghost Allegations).

A ZEC Official tried to contact our team through Newsday after this report was published as noted in the [next day’s article](#) which also included some of our findings.

Our team choose to make our findings available to ZEC at the same time they are released to the public and not before.

## 8. Perplexing ID Numbers

During our analysis, we came across ID numbers that didn't make sense.

We thought it would be logical and safe to assume that the RG's office in Harare has issued the most ID numbers compared to other offices. If ID numbers are issued in sequential order, it is very likely that the Harare RG's Office would have passed the 63-999999 (999k) threshold and moved onto 63-1000000 (1 million range) ID numbers and possibly even moved beyond the 2 million range of ID numbers.

We arranged the ID numbers in numerical order for each RG's office. The last ID number issued by the Harare RG's Office which made sense to us was in the 63-3250000 range. The next few numbers in the sequence were: 63-4xxxxxx, 63-5xxxxxx, 63-9xxxxxx, as evidenced in the following table:

Surname	Forenames	ID Number	Gender	Date of Birth	Voter Address	Constituency	Province
Mairosi	Peter	63-9809321-N34	Male	14-dec-66	1706, Epworth, Hre	Epworth	Harare Metropolitan
Sindura	Peter	63-9024190-K68	Male	04-jun-66	House No 10438, Hatcliffe, Harare	Harare North	Harare Metropolitan

- 12 voter registrations use ID numbers in the 9 million range issued by the Harare Office. Looking at the full set of ID numbers in the 9 million range, we identified strange similarities that should be statistically impossible, such as the same forenames, and the same year of birth.
- Zimbabwe has been issuing ID Numbers at birth for the last 16+ years. One of our team members had two friends who obtained birth certificates and ID numbers for new babies in January and May of this year. Checking with the parents we found that the babies had been issued ID numbers in the 3.27m and 3.3m range respectively. Calculating the dates between these ID numbers revealed that an average of 211 ID numbers are issued per day at the Harare Registrar Office (figure includes those obtaining ID for first time late in life). **If ID numbers are issued in sequential order as they should be, this would imply that all ID numbers above the 3.5m range issued from Harare RG**

**Office would be fake because these have not yet started to be issued.** Yet these numbers and higher are appearing in alarming frequency for most RG offices across Zimbabwe.

- We found approximately **700 ID numbers** above the 3.5m range for RG offices across the country that we do not expect to be issuing such high numbers.
- A fake ID number could be created by adding an extra digit to an existing number, recalculating the check letter and randomly assigning prefixes and suffixes. But these apparently fake records leave behind the problems that we have discussed above.
- One of our team members also had a family member who had been born in November 2000 (shortly after IDs began being issued at birth) with an ID number in 2.1m range from the Harare office. Since this person has not yet reached the legal voting age, a majority of ID numbers issued after that range should be carefully screened for voting eligibility. In some cases older people only apply for their ID numbers for the first time late in life and are assigned the next sequential number. So it is possible that a 50 year old person has a recently issued ID (with a higher National Number) than a 17 year old who obtained their ID soon after birth.
- Based on these patterns we venture to say that as many as 15,000 perplexing ID numbers appear on the voters' roll. If each RG office would tell us what National Numbers they are currently issuing, we would be able to make the determination with a high degree of accuracy.

If we generate a list of registered ID numbers in numerical order according to the issuing office, it is normal to expect some gaps – because not everyone is registered to vote and some people have passed away. Harare (63) and Bulawayo (08) did not have gaps large enough to warrant concern.

However, the issuing office in Uzumba (U.M.P.) caught our attention:

- From among the registered voters, the final ID Number with 6-digits is: 85-075588-P47 (effectively meaning they had issued 75 thousand ID numbers)
- The very next ID in the numerical sequence from this same office has a 7 Digit National Number: 85-2000201-Z47 (effectively meaning they had now issued over 2 million ID numbers)

This large gap in the sequence raises the following questions:

1. Is it possible that absolutely no person who has been issued with an ID number between 075588 and 2000201 has registered to vote (a gap of approximately 1.9 million people)?
2. Why has a small office in the Uzumba-Maramba-Pfungwe area, a largely rural area, started issuing ID numbers in the 2 million range - almost catching up with the Harare Office?
3. It seems implausible, but we found an instance of an ID number in the 9 million range from U.M.P: 85-9033454-P85 and many other issuing offices throughout the country.
4. It seems equally implausible that there are no voters who hold ID numbers between 85-325000 (325k) and 85-9000000 (9m) who have registered to vote.

51466	SHUPIKAI	85-075527-Y85	Female	03-Sep-99	MUNYUKWI; HEADMAN MUSKWE; C...	8500ZVA1205
51467	ENERES	85-075568-S85	Female	02-Feb-79	MANYIKA 2; HEADMAN MUSKWE ;...	8500ZVA1004
51468	GETRUDE	85-075569-T49	Female	18-Mar-97	KADEMO VILLAGE; HEADMAN MUS...	8500ZVA1204
51469	SHYLET	85-075571-W25	Female	17-Apr-97	MARONGO VILLAGE; HEADMAN MU...	8500ZVA1204
51470	BLESSING	85-075583-J85	Male	02-Feb-76	JAJI VILLAGE; HEADMAN CHIMH...	8500ZVA1506
51471	MERCY	85-075588-P47	Female	07-Nov-83	CHITIMBE VILLAGE; HEADMAN...	8500ZVA1503
51472	BLESSING	85-2000201-Z47	Male	02-Jul-99	JOE; NYAJINA	8500ZVA0805
51473	MIRIAM	85-2000202-A47	Female	30-Nov-92	VILLAGE KAZUWA; HEADMAN DY...	8500ZVA0904
51474	SHEPHERD	85-2000203-B47	Male	04-May-95	JOE; NYAJINA	8500ZVA0805
51475	CHRISTOPHER	85-2000235-L47	Male	25-Dec-93	VILLAGE NYAMAYARO; HEADMAN...	8500ZVA1102
51476	CONSTANCE	85-2000290-W85	Female	28-Feb-94	CHIMINA VILLAGE; HEADMAN CH...	8500ZVA1401
51477	PERCY	85-2000297-D85	Male	24-May-94	MUNEMO VILLAGE; CHIEF NYAJINA	8500ZVA1507
51478	STEWART	85-2000323-G47	Male	01-Apr-94	JOE; NYAJINA	8500ZVA0805
51479	MAZVITA	85-2000327-L85	Female	14-Dec-95	VILLAGE TSOMBA; HEADMAN MUT...	8500ZVA1103
51480	THERESA	85-2000339-Z47	Female	01-Oct-89	CHIMINA VILLAGE; HEADMAN CH...	8500ZVA1401
51481	RODNEY A	85-2000392-G61	Male	29-Jun-97	KATIYO VILLAGE; CHIEF NYAJINA	8500ZVA0901
51482	PARIS	85-2000403-T85	Male	09-Oct-95	KAGOYO VILLAGE; HEADMAN MAG...	8500ZVA1403
51483	PAIDAMOYO	85-2000410-B85	Female	24-Jan-96	GOTORA 2; CHIMHAGA; NYAJINA	8500ZVA1301
51484	JUSTICE	85-2000425-S47	Male	16-Aug-97	TAKAWIRA VILLAGE; HEADMAN M...	8500ZVA1304
51485	SHELTER	85-2000437-P47	Female	20-Apr-97	VILLAGE ZAMBURE; HEADMAN DY...	8500ZVA0805
51486	IRVINE	85-2000525-B47	Male	22-Mar-00	VILLAGE CHISANGO; HEADMAN D...	8500ZVA0903
51487	KUDAKWASHE	85-2000749-V85	Male	02-Dec-98	VILLAGE MUZA; HEADMAN CHIMH...	8500ZVA1406 A

#### The Mysterious Uzumba Gap

These findings confused our team and made us question everything we thought we knew:

1. How are ID Numbers being issued in Zimbabwe? Is our understanding of the way ID numbers are generated and issued accurate? Is it possible that the U.M.P office abandoned 6-digit ID numbers for some reason and started issuing 7-digit ID numbers?
2. Is this evidence of gross incompetence or does it reveal tampering with the national database?

These kinds of anomalies could never be found just by reading through the Voters' Roll. We needed specialized analytical tools to discover these issues.

These anomalies occurred with worrying frequency, as illustrated in our supporting files (One Million Mark IDs).

## 9. Same Name – Same Date of Birth

Our initial findings prompted us to dig deeper and run further tests. For example, we wanted to find out how many people had the same Surname and Forenames and the same Date of Birth. With over 5.6 million records, we expected to find a few coincidences.

Surname	Forenames	ID Number	Gender	Date of Birth	Local Authority	District	Province
Munkuli	Maria	79-056759-J06	Female	1-Apr-1963	Binga RDC	Binga	Matabeleland North
Munkuli	Maria	79-056426-X06	Female	1-Apr-1963	Binga RDC	Binga	Matabeleland North
Munkuli	Maria	79-024573-Z06	Female	1-Apr-1963	Binga RDC	Binga	Matabeleland North
Kapita	Clemence	38-050071-X38	Male	1-Jan-1971	Hurungwe RDC	Hurungwe	Mashonaland West
Kapita	Clemence	38-058205-N38	Male	1-Jan-1971	Hurungwe RDC	Hurungwe	Mashonaland West
Kapita	Clemence	38-087895-K38	Male	1-Jan-1971	Hurungwe RDC	Hurungwe	Mashonaland West

Looking at the table above:

- Three Maria Munkuli's were born on the 1st of April 1963, who now all reside in Binga Rural District Council, but will be voting in slightly different wards. Notice also that the ID Numbers all start with 79 and end in 06.
- The last three records in our sample above all seem to fall under Chief Dendera according to their address data which is somewhat incomplete and not shown here. Two of these live on Redleaf Farm. All of their ID numbers start with 38 and end with 38.
- In all 6 records it's interesting to note that they are all recorded as having been born on the first day of the respective months.

Children born in Zimbabwe usually take the last name of their father, or where the father is not known, the last name of the mother. We expected to find a number of surnames that were unique to only 1 person (i.e. a surname not shared by more than 2 or more people). We did not expect to find at least **76,000** surnames that were unique to only one person.

408356	ZHANJA	EDWARD N	03-27-596-M18	Male	03-Jul-42
4619768	MOYO	EDWARD N	08-397184-Y73	Male	14-Apr-60
5377645	TINARWO	EDWARD NGONI	22-023121-Z27	Male	11-Aug-61
820871	RIMAYI	EDWARD NGONI	63-1153027-Y25	Male	16-May-81
309586	MUTAPURI	EDWARD NGONI	59-153157-J32	Female	13-Jul-94
2529399	MAROVANYANGA	EDWARD NGONI	63-164763-A25	Male	26-Nov-59
1171801	TINARWO	EDWARD NGONI	07-198415-N07	Male	10-Aug-92
2547976	CHIKANDAMINA	EDWARD NGONIDZASHE	63-2750954-A25	Male	29-Feb-96
3970636	CHADOKA	EDWARD NGONIDZASHE	75-372141-P50	Male	23-May-86
563762	DZADZA	EDWARD NHAMO	50-083980-H50	Male	10-Feb-77
1788496	KABAIRA	EDWARD NHAMO	50-074833-Q50	Male	08-Jun-74
1607240	MACHIPANDA	EDWARD NHAMO	75-072151-N50	Male	19-Jul-54
3739715	MARAGA	EDWARD NHAMO	04-183290-D04	Male	12-Apr-97
910350	DUMWA	EDWARD NHAMO	50-056992-Y50	Male	31-Mar-66
5250121	MAUNZE	EDWARD NHAMOINESU	75-295146-Z50	Male	17-Apr-73
3680983	TOME	EDWARD NHAMOINESU	63-860535-Z86	Male	14-Feb-73
687253	TOME	EDWARD NHAMOINESU	63-860535-Z43	Male	14-Feb-73
4948876	MARIMIRA	EDWARD NHAMOINESU	42-043128-B43	Male	03-Mar-55
2578736	NYADIRA	EDWARD NIGEL	63-1627751-C25	Male	16-Aug-98
3344012	MADZURA	EDWARD NIGEL	70-288613-Q71	Male	09-Mar-97
1868045	PARERENYATWA	EDWARD NYAMADZAWO	63-176324-R34	Male	12-Aug-47

80639	3007045	ZIMONDI	EDWARD TRYMORE	85-015387-D85	Male	27-Sep-81
80640	527940	ZIMUNYA	EDWARD WALTER	75-326460-L75	Male	10-Nov-79
80641	873163	MUPANGANO	EDWARD WALTER	63-2018724-Y71	Male	30-Sep-95
80642	172192	MOYONIZVO	EDWARD WALTER	08-349082-N70	Male	16-Mar-52
80643	1232475	DUBE	EDWARD WILFRED	63-304950-C07	Male	10-Apr-58
80644	2802233	GARETA	EDWARD WILFRED	63-235719-B47	Male	09-May-31
80645	2314805	ZHUWAKI	EDWARD WILSON	63-102839-R11	Male	09-Feb-46
80646	2521001	NYAKAPUNHA	EDWARD WILSON	49-104267-C49	Male	14-Mar-90
80647	183370	MAGAGULA	EDWARD WILSON	08-856805-L08	Male	23-Sep-91
80648	331909	MAZHAWIDZA	EDWARD WINSTON	59-082085-G80	Female	12-Jun-86
80649	4689304	CHITSVARIWA	EDWARD WINSTON	59-156446-J26	Male	02-Feb-93
80650	1691875	MUPOMBWA	EDWARD Z	75-386649-J75	Male	30-Aug-86
80651	1572251	CHITARA	EDWARD Z	75-3024273-B04	Male	06-Mar-88
80652	1059503	MANYERE	EDWARD ZORORO	63-935621-P18	Male	05-Jan-76
80653	3335902	MAWADZA	EDWARD ZORORO	70-087408-P34	Male	22-Jul-71
80654	978426	MAGWENDERESE	EDWARD ZVIKOMBORERO	63-1415701-N75	Male	13-Feb-91
80655	2772560	KUPFUNYA	EDWARD ZVIKOMBORERO	47-002150-547	Male	23-May-59
80656	587610	TAKAENDESA	EDWARDS	43-147841-B43	Male	14-May-87
80657	3127219	TAPERA	EDWARDS	63-211656-W32	Male	15-Aug-49
80658	3128303	KARIMF	EDWARDS	63-211656-W32	Male	25-Feb-88

## 10. Same Details – Different ID

Our search results for the same name and date of birth prompted us to see if we could find near exact duplicates using address data also. Remember that Voter Address data was inconsistent and not a reliable way to search, so we ran a search adjusting the criteria to produce results that were as accurate as possible.

Here is a sample of what we found:

Surname	Forenames	ID Number	Gender	Date of Birth	Voter Address	District	Province
Nemaramba	Marble	44-039180-Y44	Female	28-Oct-1954	Nemaramba Village, Headman Nemaramba, Chief Mutambara	Chimanimani	Manicaland
Nemaramba	Marble	44-044324-P44	Female	28-Oct-1954	Nemaramba, Nemaramba, Mutambara	Chimanimani	Manicaland
Munkuli	Maria	79-056759-J06	Female	01-Apr-1963	Village Chivwetu; Chief Sinakoma	Binga	Matabelaland North
Munkuli	Maria	79-056426-X06	Female	01-Apr-1963	SIANZYUNDU VILLAGE; CHIEF SABA	Binga	Matabelaland North
Munkuli	Maria	79-024573-Z06	Female	01-Apr-1963	KABUBA VILLAGE; HEADMAN BBOLOBBOZA; CHIEF SINAMAGONDE	Binga	Matabelaland North

What are the possibilities that two people with the same details have striking similarities in ID number also?

- In the first two records the ID numbers start with 44 and end with 44. And both these people with the same names and dates of birth live in the same village.
- What's even more surprising is that their ID numbers tell a story: Both these females inherited their father's origin, which happens to be somewhere near Mt. Darwin in Mashonaland Central Province. They are now living in Manicaland Province, but it appears they travelled back to Mount Darwin to get their ID Documents rather than using any one of the 7 RG offices in Manicaland? Or did they move to Manicaland after getting their ID Documents?
- The last three records have a similar story. Three people with the same Name and Date of Birth. The prefixes and suffixes on their ID numbers tell

an equally puzzlingly story. Zimbabweans are generally not in the habit of naming triplets with the exact same name.

- We found **4,983 people** who ZEC would have us believe are different people, with exactly the same first name, surname and date of birth, most also having the same gender. There were several more cases where this “coincidence” occurred in three records. Some of the records in the supporting file we compiled may well be genuine records, but the coincidences we uncovered were beyond what is statistically reasonable.

A file with our findings has been included in our supporting files (Same Name & Same DOB).

In addition to the cases above, we found cases where the name was just slightly different and other key details were the same. An example is shown below:

Surname	Forenames	ID Number	Gender	Date of Birth	Voter Address	District	Province
TSERINA	AARON	07-201518-L70	Male	24-Aug-1992	HSE.NO. 228, 55 STREET, KUWADZANA 3, HARARE	Harare	Harare Metropolitan
TSERIWA	AARON	07-201518-L07	Male	24-Aug-1992	STAND NO 6850, 118TH STREET, KUWADZANA 5, HARARE	Harare	Harare Metropolitan
TSERIWA	AARON	18-124360-Q18	Male	12-Feb-1989	HOUSE NUMBER 4216, SUBURB CHARUMA, CHIVHU	Chikomba	Mashonaland East

- The first surname has been changed slightly in both of the subsequent records. The ID number in the first two records has been manipulated so subtly that you might not see the difference at first glance (“L70 / L07”). The record seemed to have been duplicated a second time and assigned to a completely different part of the country with near completely different details. Could these really be three different people?
- The first record was assigned to ward 37, Kuwadzana 1 High School. The second record was assigned to ward 38, Kuwadzana 6 Primary School. The third record was assigned to ward 10, Chivhu B Primary School.

## 11. Same Surname and Middle ID Numbers

Since ID numbers are issued sequentially across all districts, only 61 people should share the middle digits that are sandwiched by the district code and the validation

letter. There is a very low statistical probability that people who share the same last name would share the same set of middle numbers across districts. In our analysis we found **122,788** cases like this.

1	Surname	Forenames	IDNumber	Gender	DOB	Address
2	ABRAHAM	FASHION	70116038-170	Male	11/11/1975	677, UNNAMED, CHIKONOHONO, CHINHOYI
3	ABRAHAM	CLIFTON	05116038-K05	Male	10/25/1991	HOUSE NUMBER 155, RANE MINE
4	ANDERSON	CHRISTINA	25139446-125	Female	12/8/1999	STAFF QUARTERS, BROOKMEAD A OF A FARM, CHIEF RUSIKE
5	ANDERSON	DOUGLAS	24139446-C24	Male	6/6/1984	STAND 222, NGEZI SUBURB
6	ANTONIO	PETER	70128273-170	Male	11/28/1977	CHIMHANDA VILLAGE, HYEADMAN NOHWEDZA, CHIEF DOTITO, MT DARWIN
7	ANTONIO	MEGGIE	32128273-K32	Female	3/24/1979	HOUSE NUMBER 17, 3RD STREET, HEROES, CHEGUTU
8	ANTONIO	AUGUSTINE	42155805-B42	Male	6/15/1970	MIMOSA, CHIEF ZYIMBA, ZYIMBA
9	ANTONIO	RUDO	45155805-W45	Female	9/14/1985	ZAMBEZI VILLAGE, HEADMAN KAITANO, CHIEF CHISWITI, MT DARWIN
10	BAKO	BRIGHTON	80058737-Q80	Male	9/12/1984	PLOT NUMBER 21, RUWARE RANCH FARM, RUWARE RANCH, MARONDERA
11	BAKO	NYASHA	45058737-M45	Female	11/13/1973	HOUSE NUMBER 16011, COLDSTREAM INFILL
12	BALOYI	PRIMROSE	28138594-C28	Female	2/17/1994	NSIMBI VILLAGE, HEADMAN TAWENI, CHIEF NHLAMBA, GWANDA
13	BALOYI	WILLIAM	26138594-P26	Male	9/4/1979	PLOT 240, ABENDRUE FARM MUZVEZYE
14	BANDA	SIGN	86001067-V86	Male	1/18/1977	MHEMBERE VILLAGE, HEADMAN NYARUMWE, CHIEF MUSANA, BINDURA
15	BANDA	RONALD	46001067-146	Male	6/10/1994	PLOT NUMBER 29, CRAIGLEA FARM, MAZOWE
16	BANDA	MAINA	35002970-F35	Female	9/3/1959	WESSELS A. HEADMAN OWEN TSHUMA, CHIEF MTSHANE, BINGA
17	BANDA	PETER	79002970-579	Male	5/6/1940	CHISUMA VILLAGE, HEADMAN ENOCK NDLOVU, CHIEF MVUTHU
18	BANDA	CHARLES MCHEKENI	24003536-Z24	Male	12/15/1949	HOUSE NUMBER C611, CHEGUTU TOWNSHIP, CHEGUTU
19	BANDA	GETRUDE	86003536-D86	Female	3/1/1976	HOUSE NUMBER 62, MUFAKOSE
20	BANDA	ZONDIWE	84006030-B84	Female	1/4/1980	SEABOROUGH VILLAGE, HEADMAN TSHAKALISA, CHIEF DELI, UMGUZA
21	BANDA	MEMORY	45006030-K45	Female	10/19/1962	FIESTA VILLAGE, HEADMAN MHANDU, CHIEF NEMBIRE
22	BANDA	EVERLET	24-007010-A24	Female	6/5/1954	HOUSE NO.: 20A, MUONDE AVENUE, EIFFEL FLATS SUBURB, KADOMA
23	BANDA	MBOYI	32-007010-C32	Female	5/9/1963	HOUSE NUMBER K429, KATANGA SUBURB, NORTON TOWN

This number of cases with the same surname & national number should be statistically impossible.

When we limited this to cases where the people also have same prefix and suffix in the ID numbers (i.e. where the code of the district they registered in is the same as their originating district) the number was reduced to **74,932**. Of these cases 50,290 exist also in the 2013 voters roll, meaning 24,642 were added in 2018.

This is significant in that the easiest way to assign bulk numbers is to leave the issuing district and district of origin the same. The table below lists the distribution of incidences across districts. A file with all the records has been included with this report as a separate file (Same Surname National Number, Prefix Inverted).

District Name (Code)	Cases of matching surnames/middle ID number	District Name (Code)	Cases of matching surnames/middle ID number
Nkayi (53)	6676	Chirumanzu (77)	221
Gwanda (28)	5715	Bikita (7)	209
Lupane (41)	5687	Zvimba (86)	201
Tsholotsho (73)	5163	Murehwa (47)	199
Bulilimamangwe (56)	4650	Makonde (70)	193
Hwange (79)	4598	Zaka (83)	188
Mberengwa (3)	4227	Mazowe (15)	176
Insiza (21)	4201	Mutoko (48)	174
Matobo (39)	3621	Mt Darwin (45)	170
Gokwe South` (23)	2898	Chikomba (18)	165
Bubi (35)	2605	Mudzi (49)	160
Beitbridge (2)	2529	Masvingo (22)	151
Umzingwane (19)	2342	Bindura (5)	150
Zvishavane (67)	2171	Shamva (68)	148
Gokwe North (26)	2150	Goromonzi (25)	142

Kwekwe (58)	2098	Chimanimani (44)	127
Binga (8)	2069	Makoni (42)	125
Gweru (29)	1459	Kariba (37)	124
Mwenezi (54)	1444	U.M.P. (Uzumba, Maramba, Pfungwe) (85)	115
Umguza (84)	1130	Hwedza (80)	95
Chipinge (13)	575	Marondera (43)	90
Shurugwi (66)	451	Rushinga (61)	86
Bulawayo (8)	382	Nyanga (34)	85
Chivi (12)	343	Mutare (75)	83
Kadoma (24)	340	Seke (59)	83
Chegutu (32)	318	Muzarabani (11)	81
Chiredzi (14)	246	Mutasa (50)	80
Buhera (7)	242	Unknown (Mhondoro) (10)	31
Gutu (27)	240	Harare (63)	30
Guruve (71)	231	Unknown (Chitungwiza) (46)	20
Hurungwe (38)	229		

We were also curious to find out how many people shared the same first name and the same middle part of their ID, with prefixes and suffixes being the same. We found 74,847 thousand cases like this. The full list is available as a separate attachment (Same First Name & National Number).

## 12. Age Anomalies

The Zimbabwe Electoral Commission asserts that they put necessary safeguards in place to ensure that only eligible people were able to register as voters. During our analysis, we uncovered a person who happened to be 17 years old at the time of registration. We make this determination based on the fact that her 18th birthday occurs on 6-June-2018 – exactly 6 days after voter registration had closed (1 June 2018). She has since turned 18 years old, however, ZEC assured the public that anyone below the age of 18 years old would automatically be rejected by the BVR system. Her record is noted in the table below:

Surname	Forenames	ID Number	Gender	Date of Birth	Voter Address	District	Province
Fino	Patience	63-2161477-P63	Female	6-Jun-2000	Mhizha Village, Chief Chihota	Marondera	Mashonaland East

We found another voter whose birthday fell on the 1st of June 2018 – on the day that voter registration closed. It would be interesting to find this voter (ID 85-071274-A85) and check what registration date is shown on their BVR slip.

Our team found another voter who is still 17 years old and will not turn 18 years old until September 2018 – long after the polls are held and results have been announced. This person is entered in the voters' roll with the details below.

Surname	Forenames	ID Number	Gender	Date of Birth	Voter Address	District	Province
Watakwarwa	Tafadzwa	48-173243-V48	Male	26-Sep-2000	House 2, Street Shaninga, Chief Mutoko, Mutoko	Mutoko	Mashonaland East

At the other end of the spectrum, we found two people whose possibility of still being alive and able to vote is questionable. It can be seen that Sihle and Phidas are 134 and 140 years old respectively, possibly the oldest people in the world.

Surname	Forenames	ID Number	Gender	Date of Birth	Voter Address	District	Province
Mpofu	Sihle	53-079156-J53	Female	17-Jul-1884	Mpoko Village, Chief Sikobokobo, Nkayi	Nkayi	Matebeleland North
Ndlovu	Phidas	56-060628-P56	Male	27-Sep-1877	House Number 1590, Dulivhadzimu Suburb	Beitbridge	Matebeleland South

This table shows two of the oldest people in the 2018 voters' roll

We would have dismissed these records as typing mistakes - the Electoral Offices entered 18xx instead of 19xx in the birth years. But to check this, our team searched for these ID numbers in the 2013 and 2008 voters' rolls. We did not find any reference to them in the 2013 roll, but the 2008 roll revealed the following:

Surname	Forenames	ID Number	Gender	Date of Birth	Voter Address
Mpofu	Sihle	53-079156-J-53	F	01-Jan-1970	Mpoko Village, Chief Sikobokobo, Nkayi
Ndlovu	Phidas	56-060628-P-56	M	01-Jan-1970	House Number 1590, Dulivhadzimu Suburb

The two oldest people were also found on the voters' roll from 2008. Their dates of birth had been changed

This raises a number of questions:

1. How did their dates of birth go from being 1st Jan 1970 to much more random dates? If ZEC used 1st Jan 1970 in the 2008 Roll because their actual dates of birth were not known, how did ZEC come up the more specific dates of birth on the 2018 roll?
2. Considering they are in different parts of the country, we wondered why their voting patterns were so similar (voted in 2008, skipped 2013, registered in 2018)
3. Did ZEC really capture biometric data for these two people? Exactly how old are they? Is it possible that they were deceased between 2008 and 2018?

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## Engaging with ZEC

When one of our team members brought the issue of an underage voter to the attention of a ZEC Commissioner on Twitter, Netsai Mushonga, and she replied:

*“That's impossible! Our BVR machines are set to reject anyone below 18 years. Come to our VR department with that and speak to our competent team @ZECzim”*

A copy of the conversation has been compiled into a separate supporting document included with this report. (ZEC Denies 17Y Old). This brings the safeguards which

ZEC setup into question. How did this underage voter slip through and manage to register?

### 13. Address Anomalies

In accordance with the law which requires that a citizen intending to register to vote needs to provide some sort of proof of Residence (Electoral Act, Section 24), ZEC were strict to require this proof, which could be in the form of a title deed, utility bill, rates, water, electricity, telephone bill, rental agreement, statement from employer, hospital bill with voter’s address, statement from village chief or headman etc. As a secondary backup, ZEC allowed people to complete an affidavit (Form VR9) and have the affidavit notarized by a commissioner of oaths.

It has been argued that issues with addresses are due to this allowance of affidavits. We agree that a voters’ inability to produce the short list of acceptable documents to prove residency was an unfair obstacle, which would have disenfranchised many voters. The use of affidavits solved the issue of proof. It did not release ZEC from recording where a person lived, and entering that information into the voters’ roll in a manner that clearly showed where a person resides, as well as what ward and constituency they belong to.

#### Incomplete or unclear addresses

Despite these requirements, we found at least **33,000** addresses in Harare Metropolitan alone where the address was incomprehensible or where an exact geographical location could not be definitively determined such as in the samples below:

Surname	Forenames	ID Number	Voter Address	Ward	Constituency
ANIWUTE	MARYLIN	63-1503836-M63	UNKNOWN, UNKNOWN, GREENDALE, HARARE	9	Harare East
MAFARA	CLEVER	75-314446-C75	12, GREENDALE	9	Harare East
MAFIKWU	GRACE	85-014991-Y85	0, EPWORTH, HARARE	7	Epworth
PARADZA	RICHMAN KUDAKWASHE	63-1479170-B83	5, CBD	1	Bulawayo Central
GUSHO	MARRY	45-045229-E45	N/A, N/A	22	Chitungwiza South

This table shows incomplete addresses.

- We found 417 cases of addresses that had Unknown, Unknown, Greendale, Harare – all of which were assigned to Ward 9, Harare East. We found almost 1,000 records where addresses were indecipherable in Harare and Bulawayo Metropolitan. An address like 5, CDB (third record) is inexcusable if this person really does live in the Central Business District of Bulawayo

where all roads have names and all properties have numbers. An address like N/A, N/A is equally inexcusable.

- Candidates whose campaign involves going door to door would not be able to reach these potential voters with their message.
- Independent auditors like ZESN and ERC who select random samples from the voters' roll and went to find the people to check accuracy of voter registration details would not be able to find these people.
- We found 2,083 addresses where the primary address consisted of unknown, followed by some sort of vague area.

This leads us to ask:

1. Do these people actually exist if there is no way to find them?
2. How did ZEC know where to assign some of these voters?
3. How do auditors check that people were assigned to the correct polling stations, wards, authorities and constituencies since we already know there are numerous mistakes in these areas. Check Incorrectly assigned wards and constituencies later in this report.
4. Was there any quality control or training for ZEC officials so that addresses like these were not accepted?
5. Are these people voting for the correct representatives?
6. If some of them have been assigned incorrectly, will they possibly influence the outcome for contesting candidates and their respective wards, authorities, and constituencies?

It was difficult to identify the full extent of genuine errors in voter addresses because of the multiple ways in which ZEC entered addresses. There seems to be no standard.

For example, two people with the same names (assumed to be father and son) had their addresses entered as:

ID Number	Voter Address
63-203164-Q18	3, TORONTO, BRAESIDE, HARARE
63-1388906-N18	3, TORONTO ROAD, BRAESIDE, HARARE
13-294709-V44	475, UNNAMED ROAD, HIGH DENSITY, CHIPINGE
32-090341-E44	475 DAIRYBOARD, UNNAMED STREET, HIGH DENSITY SUBURB, CHIPINGE

This table shows voter addresses entered in numerous different ways.

- The first two records seem to be a father and son relationship – where both people are living at the same address.
- The second two records also seem to be a father and son relationship where both people are living at the same address.
- In the samples above, there is no single standard for entering addresses.

We found cases where the same address had extra spaces, extra commas, extra words (such as road, street, suburb, etc). There were also cases where House Number was captured in different ways as previously outlined in another section, for example:

- House Number
- House No
- Hse No

This non-standardized and inconsistent data entry makes it impossible for a computer to reliably determine exactly how many people are registered at the same address.

Even in rural areas, where the only details recorded of a voter’s address are village, headman, and chief, spelling errors were prolific.

Multiple Spellings of “Chief” that we discovered in Address Data			
CHIEKF	CHIE9F	CJEF	CHIE
CHIEAF	CHIIFE	CHEAF	CHIEEF
CHAIEF	CHIEH	CHIWEF	CHIFE
CHYIEF	CJHIEF	CHIOEF	CHIFEF
CHIEIF	CHIAEF	CHOIEF	HIEF
CHIEDF	CHUIEF	CIEF	C HIEF
CIHEF	CHIEEF	CHEF	CHHIEF
CHIEG	CHIRF	CHUEF	CHIEF
CHIUEF	VHIEF	CHIF	CHIE

CHIEKF	CHIE9F	CJEF	
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It is difficult to determine whether these mistakes were genuine errors or deliberate attempts to make analyzing address data impossible. When you look at some of the spelling errors in relation to the location of characters on a keyboard you can determine that some might well have been genuine. However mistakes like “CHIE9F”, where the number “9” is nowhere near the letters “E” and “F” are difficult to comprehend. ZEC’s press statement insisted that there were data entry errors made by election officers. File included separately (BVR Update Press Release).

If these were genuine mistakes, they beg the question: Is it possible that similar typographical mistakes appear in surnames and ID-numbers? Such mistakes would be serious cause for concern because the voter could well be turned away if their ID number or name is not found on the polling station list.

### **Addresses which do not exist**

In addition to these mistakes, we are also aware of reports of an entirely different kind that are an even more serious cause for concern. For example, in an [article published by the Zimbabwe Situation](#):

*“400 voters were registered understand number 100086 Unit G, a non-existent address”.*

The report also stated that, *“We have another case in Dombotombo, Marondera, where 300 people are registered under one address of a two-roomed house.”*

Another non-existent address [that made headlines](#), was 3 Kew Drive, Highlands, Harare which reportedly had 8 voters registered under it. The Standard searched for the address in Highlands District Council offices and no record of it could be found, neither could a rates and taxes bill be found for the property.

A reporter at the Newsday picked up the story and drove out to the area in an attempt to find the address. He reported the same thing: the address didn’t exist. Even more surprising is that the 8 people registered under this fictitious address will be voting in Glen view North, Harare East, Harare West, Kuwadzana and Harare Central constituencies!

The Standard article also went on to state,

*“Another fictitious address used to register potential voters was 6 Mabelreign, which has 26 registered voters. Just like those from 3 Kew Driver (sic), the Mabelreign potential voters will cast their ballots in different constituencies. Attempts to locate this address also failed.”*

The Zimbabwe Electoral commission has yet to explain how this happened, much less why they would have been assigned to Constituencies all over Harare Metropolitan Province.

One of our analysts took the time to standardize the recording of addresses in the data, so as to enable computer analysis. Our findings not only confirmed the news reports above, but also highlighted a substantial number of anomalies considered now.

### **Incorrectly assigned wards and constituencies**

When we think of the duties of an election commission, we immediately think of registering voters, managing voting on Election Day, and counting the votes cast. This is what the general public is most exposed to. Another vital task perhaps not considered by the general public as often, is the critical task of determining what ward and constituency a voter should vote in. It is a fundamental requirement of representative democracies that only people represented by an elected official, vote for that elected official.

Using Voter Address data to determine the correct allocation of Polling Stations, Wards and Constituencies was extremely difficult, owing to the issues outlined in Section 13 under “Address Anomalies.”

To help identify where different spellings of the same address existed, we created a new field, populating it with the address as originally provided, replacing the most common spellings and formatting differences in a more standard way (ie. replacing instances of “HOUSE NUMBER,” “HOUSE NO,” “HOUSE NO.,” “HOUSE,” “HOUSE NUM” with “HSE “). Doing this for many words used throughout the address field eventually reduced the number of distinct addresses in the voters’ roll by 319,658. It is a near certainty that this does not reflect the number of truly distinct addresses on the voters’ roll, and more work would reduce the number further. Then a unique ID was assigned to each remaining distinct address.

A new table was created consisting of the Province, Constituency, the new cleaned addresses, the unique address ID, and a count of the number of the total voters for each combination of Province, Constituency, and address.

Now another new table was created, which removed all records where the combination of Constituency and address ID had the highest number of voters, making an assumption that these were more likely correct. Note that where the count of the total voters for the same address ID was equal, for our purposes one was chosen as “correct” at random.

With this, it was possible to join back to the voters’ roll on Province, Constituency, and the unique address ID, giving us an idea of how many voters in the voters’ roll were assigned a constituency which was in conflict with the constituency assigned to a greater than or an equal number of residents at the same address. We are confident that at least, and very likely more than, **9,100 records** are assigned to incorrect constituencies. These voters will either be turned away on Election Day, or will vote for an MP that does not represent them.

Following the same process for wards, we are confident that at least **45,010 voters** are assigned to incorrect wards, and risk being turned away - not allowed to vote - on Election Day.

Of concern here is not just the risk of voter disenfranchisement, but the other fundamental issue of a people’s right to elect their own representatives. A situation is created where it is necessary to either deny individuals their right to vote, or to permit voters from outside a constituency to elect members of parliament that do not represent them. We conclude that both options are unacceptable.

The situation is further magnified when, due to imprecise addresses and the inability to geographically locate a place of residence, it cannot be proven that the electorate was eligible to vote for a particular office. This renders the results of an election using this voters’ roll open to challenge.

Constituency	Records assigned incorrectly
Chimanimani West	601

Mutare North	307
Hurungwe East	223
Mutasa South	213
Southerton	203
Hurungwe Central	197
Sunningdale	173
Warren Park	172
Mhangura	171
Nkulumane	161

Table shows top ten constituencies with the highest number of voters who are mis-assigned

Constituency	Ward	Records assigned incorrectly
<b>Epworth</b>	6	1475
<b>Epworth</b>	2	1228
<b>Epworth</b>	7	1009
<b>Bubi</b>	18	942
<b>Epworth</b>	4	831
<b>Epworth</b>	1	571
<b>Epworth</b>	5	531
<b>Chipinge East</b>	18	357
<b>Epworth</b>	3	357

<b>Bubi</b>	3	293
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Table showing the top ten wards with the highest number of voters who are mis-assigned:

Our analysis found at least **54,110 cases** where people had been assigned to the wrong Ward or Constituency. There may be thousands more who are incorrectly assigned; we only used a small sample of corrected, standardized addresses in our analysis. A preview of these findings are shown below:

Surname	Forenames	ID Number	Voter Address	Polling Station	Ward	Constituency
PENTLEY	CRINOS	63-1528585-N00	10, MBARE, HARARE	Mbare Vocational Training Centre	4	Mbare
GWEME	SALISIOS	14-124071-A83	10, MBARE, HARARE	Nenyere Hostels 7, 8 and 9 Tent	4	Mbare
PHIRI	LEIF P	63-2253057-H63	10, MBARE, HARARE	Shingirai Primary School	12	Sunningdale
NYAMARIV A	LEWIS	63-1214078-H15	11, MBARE, HARARE	Mbare Complex Ground No. 7 Tent	11	Southerton

- The first two records, registered at the same address are in the Mbare Constituency. The third record, registered at the same address as the first two has been assigned to Sunningdale Constituency.
- The fourth record, with an address which we assume is the very next house to the first three, has been assigned to Southerton. This way of entering Voter Address data makes it impossible to determine where these people should actually be assigned without physically trying to find the address, which may itself be impossible.
- Address, “13, Mbare” with three people registered (63-788973-P63, 63-1359650-N47, 63-918940-H21) has them assigned to Southerton and Sunningdale respectively.
- 42 Voters with an address listed as ZRP POST, CHIEF MAGONDE also seemed to be divided randomly between wards 1 - 13 in Makonde RDC, Mhangura.

We closely examined over nine-thousand records and identified many instances of confusion and inaccuracy.

## 14. Relocated Voters

In order to reduce queues on polling day, the Electoral Act was amended in 2018 to allow ZEC to create additional “sub-stations”, each one having a maximum of 1,000 voters. This means that where a polling station might have 9,000 people, the station would be divided into 9 individual substations in the same vicinity. These substations were labelled A, B, C, D, etc.

We assumed that ZEC would run the voters’ roll through a system which would extract the polling station and the number of voters for that polling station to produce the final list of polling stations and their counts. This is what we did. When we compared our list (as generated from the voters’ roll) with the official list of polling stations and counts which was released by ZEC, we found that many voters had been relocated. Check the diagrams below:



In the diagram above:

- Makokoro Business Center Tent was originally divided into two substations. Their codes had A and B on the end as shown above. Each of them had 633 voters – according to the voters’ roll.
- ZEC’s official, final list of polling stations did not show these substations (A & B). It simply showed that these two substations had been merged into one polling station with 781 Voters.

- **This means that that 781 voters can vote as planned at Makokoro Business Center Tent. 545 other voters who have this polling station code on their BVR Registration slips, will go to these polling stations on voting day but possibly be turned away because they have been presumably relocated somewhere else.**

When we compared the information in the voters' roll to the final list of polling stations provided by ZEC we found, 6 substations had been merged into three polling stations – relocating a total of 835 voters.

Upon further analysis and careful comparing of the information in the voters' roll to ZEC's final counts, we found **5,082** people had been removed from 1,349 polling stations to which they had initially been assigned in the voters' roll. This is an extreme cause for concern, and ZEC needs to fully explain this anomaly.

This raises a number of questions:

1. Has ZEC informed these voters about the changes and given them enough notice to properly plan for the relocation?
2. Has ZEC informed each one of them where they should now be voting?
3. Will their original polling station be able to provide this information to them on Election Day? Will they be able and willing to travel, and presumably queue, at that station?
4. Will their names appear on the voters' roll at the new stations to which they were re-assigned? (We are assuming they were re-assigned to a new station and not mysteriously removed from the voters' roll).

## 15. 2013 vs 2018: Comparison of Voters' Rolls

Comparing records on the 2013 Voters' Roll to the records on the 2018 Voters' Roll revealed some strong evidence that potentially deceased voters were copied, and then had their ID numbers changed slightly. A few examples appear in the table below:

Voters Roll Version	Surname	Forenames	ID Number	Gender	Date of Birth	Voter Address
2013	Zuze	Eneresi	48-9031383-A49	Female	24-Sep-1948	CHATIZA VIL HDM GUDE CH CHIMOYO MUTOKO
2018	Zuze	Eneresi	48-031383-Z49	Female	24-Sep-1948	SAMU VILLAGE, CHIEF CHIMOYO
2013	Karima	Egretta	70-004015-V11	Female	1-June-1952	Vil Jokonya CH Kasekete Muzarabani
2018	Karima	Egretta	70-004015-V45	Female	1-June-1952	JOKONYA, JOKONYA, KASEKETE, MUZARABANI
2018	Karima	Egretta	70-004015-V38	Female	1-June-1952	NYAMUPFUKUDZA 2, HEADMAN GOTEKA, CHIEF DENDERA
2013	Chininda	Rachel	70-9053601-K70	Female	18-Aug-1953	V 7 Musengezi Reset Chegutu
2018	Chininda	Rachel	70-053601-S70	Female	18-Aug-1953	VILLAGE 7, HEADMAN MURINGAI, CHIEF NGEZI, CHEGUTU
2018	Rukanzakanza	Merina	70-053601-S45	Female	12-Feb-1961	HOUSE NUMBER 468, MUONDE ST, KUWADZANA T/SHIP, BANKET

These records explained several questions that we had encountered:

- Notice the first two records: The details between the roll are exactly the same. You could be forgiven for thinking this is a real person who voted in 2013 and is registered to vote in 2018 – except that her ID number has changed. (Notice the extremely high ID number range in the 2013 Voters' Roll.
- The next three records have the same first name and surname, different suffixes on their ID numbers and the same date of birth. Two records share the same address, while the third has been assigned a completely different address.
- The last three records also have very similar ID Numbers. Two of these have the same first name, surname, date of birth, and address. The last record has been changed almost beyond recognition except for the tell-tale signs in the ID number – the only change being the suffix.

- Where the 2013 voters' roll contained one record, the 2018 voters' roll contained up to two duplicates based on their records.

This discovery raised numerous concerns for us:

1. Could this be the reason why there were ID numbers where the first 8 or 9 digits were the same in the 2018 voters' roll?
2. Could this also account for the many "coincidences" in the 2018 voters' roll that looked like duplicates.
3. Is it possible that ID numbers were manually and purposely manipulated to make it look like different people, while leaving the remnants of evidence and the confusing anomalies we have shown in this report?
4. Might this also be the reason that ZEC has refused to release the biometric data and BVR de-duplication report? Is biometric data for all 5.6 million people on the voters' roll available?
5. Why did extremely high ID numbers appear on the 2013 voters' roll when these have not yet been issued?

With the history of contested elections in Zimbabwe, these questions and suspicions are to be expected, which is why it is even more critical that ZEC make the biometric data available, and the whole process more transparent.

## 16. Recommendations

Our analysis leads us to conclude that this voters' roll is not fit for purpose.

Based on that, it is our recommendation that the election scheduled to be held on 30th July 2018 be postponed pending resolution of the issues identified in this report, and others that may be identified elsewhere.

If the election goes forward, we urge all political parties, observers, ZEC and other stakeholders to ensure the following:

1. Biometric data is immediately released to ALL political parties for auditing, to include the report generated by AFIS.
2. Observers and political party representatives are posted at EVERY polling station country wide.
3. Observer or political party representatives are set up outside every polling station to count the amount of people who enter the polling station to vote. A count of physical people who vote can be used to compare against the election results which are announced by ZEC.
4. People take pictures of results posted outside all polling stations and distribute the pictures on social media so that independent verification of results can be undertaken.
5. All Zimbabweans are immediately advised to check the voters' roll for relatives who have voted in the past, as well as advised to take their BVR slips with them when they vote.
6. A full and thorough investigation into the duplicate, invalid, and inauthentic ID numbers appearing on the voters' roll is immediately launched.
7. Address Data on the voters' roll is standardized and cleaned properly.
8. A legal assistance program is put in place to both explore legal measures to pre-empt the disenfranchisement of voters on Election Day, and to prepare a strategy for rapid response to voters' rights issues on Election Day itself.
9. A post-election audit of the systems used to collect and store biometric data including access to application and system metadata

# Appendix 1

## District Codes

District	Code
Beitbridge	02
Mberengwa	03
Bikita	04
Bindura	05
Binga	06
Buhera	07
Bulawayo	08
<b>(Undetermined)</b> (believed: Mhondoro-Ngezi)	10
Muzarabani	11
Chipinge	13
Chivi <b>(admin error - correct code: 12)</b>	13
Chiredzi	14
Mazowe	15
Chikomba	18
Umzingwane	19
Insiza	21
Masvingo	22
Gokwe South	23
Kadoma	24
Goromonzi	25
Gokwe North	26
Gutu	27
Gwanda	28
Gweru	29
Chegutu	32
Nyanga	34
Bubi	35
Kariba	37
Hurungwe	38
Matobo	39
Lupane	41
Makoni	42
Marondera	43
Chimanimani	44
Mt. Darwin	45
<b>(Undetermined)</b> (believed: Mbire)	46
Murehwa	47
Mutoko	48
Mudzi	49
Mutasa	50
Nkayi	53

<b>Mwenezi</b>	54
<b>Bulilimangwe</b>	56
<b>Kwekwe</b>	58
<b>Seke</b>	59
<b>Rushinga</b>	61
<b>Harare</b>	63
<b>Shurugwi</b>	66
<b>Zvishavane</b>	67
<b>Shamva</b>	68
<b>Makonde</b>	70
<b>Guruve</b>	71
<b>Tsholotsho</b>	73
<b>Mutare</b>	75
<b>Chirumanzu</b>	77
<b>Hwange</b>	79
<b>Hwedza</b>	80
<b>Zaka</b>	83
<b>Umguza</b>	84
<b>U.M.P. (Uzumba, Maramba, Pfungwe)</b>	85
<b>Zvimba</b>	86

## Appendix 2

Modulus 23 is a simple calculation that is applied to the first 8 (or 9) digits of a Zimbabwean ID number to generate a check letter. (Note that letters I, O, U are not used in Zimbabwean ID numbers)

1. The first 8 (or 9) digits in the ID number are divided by 23.
2. The remainder (if there is any) is used to determine the check letter as per the table below:

Remainder	Check Letter
1	A
2	B
3	C
4	D
5	E
6	F
7	G
8	H
9	J
10	K
11	L
12	M
13	N
14	P
15	Q
16	R
17	S
18	T
19	V
20	W
21	X
22	Y
0	Z