

# Analysis Journal—RAC Parking Report Automation

*mz*

## Saturday 9.3.2019

- Initialised public github repo.
- Setup folder structure, currently looks like this (output of `tree --charset=ascii -d`):

```
|-- code
|-- data
|   |-- 01-raw
|   |-- 02-interim
|   `-- 03-processed
|-- docs
|   |-- admin
|   |-- journal
|   `-- original-reports
|-- figures
`-- outputs
    |-- instructions
    |-- reports
    `-- technical-appendix
```

- available reports used for development, downloaded from RAC press website, pdfs stored in `/docs/original-reports`, see appendix for full table

Next steps: find data

## Thursday 14.3.2019

- Look through back reports available, saving all and saving links here, in appendix 1
- Start query file for Ivo.
- OK, got all reports, despite missing years, it looks like most of the data is included in other reports as they have a window of usually 4 years previous that they include data for.
- Now figure out data sources for England, and detail them
- Outline typical England report

### England data requirements and availability?

- 2017/18 uses “MHCLG tables on parking income and expenditure”

This looks like the data <https://www.gov.uk/government/collections/local-authority-revenue-expenditure-and-financing>.

- For each year there is normally budget, provisional outturn and outturn data, the latter needs to be for individual local authorities, which does not seem to exist for 2007/08, but is available for all other years.
- The files are grouped under the title *Local authority revenue expenditure and financing England: 2010 to 2011 individual local authority data - outturn* for each year

- The relevant Excel file is usually called `Revenue outturn R02 (highways and transport services) + year.xls`.
- There are three columns we are interested in: expenditures, incomes and capital charges, these are usually on separate sheets. There is one of these for both on street and off street parking. So that's 6 columns in total.
- There are also summaries, but I don't need them, maybe only for manually double-checking.
- Appendix 2 lists all the files, their links, the number of rows (local authorities) in the table and the sheets on which the data can be found.
- TODO Add the starting row and the actual columns where the data in question can be found and I can write a function to extract the data automatically.
- Download all `.xls` files to `/data/raw`
- "Earlier, councils also submitted budgets for the 2018-19 financial year but on a less detailed basis." where are these budgets? Do I need to include them as well? Ah, yes.
- At one point the England data stops including capital charges..2013/14 is last one. This means current reports are less data rich, and if I stick to the brief, it means that the code won't be able to replicate the old reports.
- At one point the England data starts including penalty charges for individual Local authorities, although the reports don't do anything special with that, just use the aggregates
- England totals do not include the national parks and the Nottingham levy. Not sure what to do with that!?

## Friday 15.3.2019

- OK, so England outturn data is tabled in Appendix 2.
- Now England Budget data
  - not in *Local authority revenue expenditure and financing tables*
  - under *Budget estimates of local authority revenue expenditure and financing for the financial year* the table *Revenue account budget (RA)* has the parking surplus down as 792, but the report says 782. There have been a few other differences, not sure if these are typos/errors?
- download data into `\data\raw` and fill out appendix two table with relevant info.
- careful because at one point there are capital charges and then not. So make sure you've got the correct column. Because these are sums, I would even set up a check?
- OK, England budget files are all saved and relevant info extracted manually.
- Now back to outlining the England report as it stands.
- E17/18 says national park surplus is 1.7 million, sum of cells DF405:411 is 1.774.
- Comparing Table 1 for E17/18 to excel file 17/18:
  - on street parking is all the same
  - off street parking: there is a discrepancy. Income is the same, but Leibling's expenditure value is higher than the Excel one (making the surplus lower): 362 vs 356?!

## Saturday 16.3.2019

- Comparing Table 1 for E17/18 to excel file 16/17
  - on street parking is all the same
  - off street parking: there is a discrepancy. Leibling's income is 693 vs 689 in the table, and Leibling's expenditures are 349 vs 343 in the table.

- Comparing Table 1 for E17/18 to excel file 15/16
  - on street parking is all the same
  - off street parking: there is a discrepancy. Leibling's income is 670 vs 674 in the table, and Leibling's expenditures are 340 vs 337 in the table.
- Trying to figure out where these discrepancies come from: It must be the nottingham workplace levy? Which I don't have data for.
- Second thing, presumably the difference is also due to not including the national parks. Although I have the data for that, I cannot confirm, because I don't know the levy numbers.
- TODO write (find) a function to convert excel column names to column numbers.
- Oh, congestion charge data needs to be read as well, that's in a different couple of cells than what i've been looking at until now, so add that to the appendix.

## England

### 1. Introduction

- Mainly pure text chunk.
- Available data: fisc.year
- Missing data: national parks, Nottingham workplace parking levy? (17/18)

### 2. Summary

#### Table 1 - Parking income and expenditure England

- Unit: whole country
- Available data:
  - Off-street: expenditures (sum from LA tables)
  - Off-street: incomes (sum from LA tables)
  - On-street: expenditures (sum from LA tables)
  - On-street: incomes (sum from LA tables)
  - On-street: penalties - single cell on summary sheet
  - Net expenditure on transport - single cell on summary sheet
  - Budget estimates for next year
- That's all, everything else is calculated from this

#### Text

- Conditional tree based on data from Table 1.

#### Figure 1

- Simple line chart based on data from Table 1.

#### Table 2

- Data from Table 1 for current year, split by London and non-London.

#### Text

- Conditional tree based on data from Table 2.

### **3. Income**

#### **Text**

- Conditional tree based on data from Tables 1 and 2
- Includes footnote on penalty tariffs.

### **4. Expenditure**

#### **Text**

- Conditional tree based on data from Tables 1 and 2

### **5. Surpluses**

#### **Text**

- Conditional tree based on data from Tables 1 and 2
- Additionally there is the total for on national parks, that data is also available
- Missing data: the total for Nottingham workplace levy.

#### **Table 3a surpluses for London councils**

- Individual LA data for 33 London councils

#### **Table 3b surpluses for top 20 non London councils**

- Individual LA data for 33 London councils

#### **Text**

- Conditional tree based on data from Tables 3a and 3b

### **6. Comparison with budgets for 2017-18 and 2018-19**

- Conditional text based on comparison of individual LA surpluses with individual LA budgets

### **7. Congestion charge**

#### **Text**

- Conditional text based on table below

#### **Table**

- Simple table based on data from outturn table.

### **Appendix 1**

- Table of all LA surpluses for 5 years, alphabetical

## Appendix 2

- Table of all LA surpluses for 5 years, by surplus size.
- link <https://www2.gov.scot/Topics/Statistics/Browse/Local-Government-Finance/PubScottishLGFStats>
- link <https://statswales.gov.wales/Catalogue/Local-Government/Finance/Revenue/Transport/RoadsAndTransportRevenue-by-authority>

## Appendix 1

### links to all reports online

| country  | year    | htmls | pdfs | tab  | window |
|----------|---------|-------|------|------|--------|
| England  | 2010/11 | link  |      | link |        |
|          | 2011/12 | link  | link | link | 2(4)   |
|          | 2012/13 | link  | link | link | 3(5)   |
|          | 2013/14 | link  | link | <-   | 4      |
|          | 2014/15 | link* | link | link | 4      |
|          | 2015/16 | link  | link | link | 4      |
|          | 2016/17 | link  |      | link | 4      |
|          | 2017/18 | link  | link | link | 4      |
| Scotland | 2010/11 |       |      |      |        |
|          | 2011/12 | link  | link |      | 1      |
|          | 2012/13 |       |      |      |        |
|          | 2013/14 | link  | link |      | 3      |
|          | 2014/15 | link  | link |      | 4      |
|          | 2015/16 | link  | link |      | 4      |
|          | 2016/17 |       |      |      |        |
|          | 2017/18 |       |      |      |        |
| Wales    | 2010/11 |       |      |      |        |
|          | 2011/12 |       |      |      |        |
|          | 2012/13 | link  | link |      | 5      |
|          | 2013/14 |       |      |      |        |
|          | 2014/15 |       |      |      |        |
|          | 2015/16 | link  | link |      | 4      |
|          | 2016/17 | link  | link |      | 4      |
|          | 2017/18 | link  | link |      | 4      |

\* link missing from RAC press releases page

\*\* pdf report missing

Columns headings:

- *country*

- *year*—period covered in report
- *html*—link to press release on RAC website
- *pdf*—link to pdf report if exists
- *tab*—link to additional tables if exist (only England)
- *window*—number of previous years’ data included in report, number in brackets is for aggregates, not at LA level

## Appendix 2

### data overview

#### England–Outturn

| year    | link | rows | las | first | e.sh | e.on | e.off | i.sh | i.on | i.off | pen.sh | pen.on | pen.l | tot.1 |
|---------|------|------|-----|-------|------|------|-------|------|------|-------|--------|--------|-------|-------|
| 2008/09 | xls  | 405  | 0   | 0     | 3    | CU   | DB    | 3    | CX   | DE    | NA     | –      | G64   | J45   |
| 2009/10 | xls  | 370  | 0   | 0     | 3    | BH   | BL    | 4    | BH   | BL    | NA     | –      | G64   | J45   |
| 2010/11 | xls  | 371  | 0   | 0     | 3    | BH   | BL    | 4    | BH   | BL    | NA     | –      | G64   | J45   |
| 2011/12 | xls  | 371  | 0   | 0     | 3    | BH   | BL    | 4    | BH   | BL    | NA     | –      | G64   | J45   |
| 2012/13 | xls  | 371  | 0   | 12    | 3    | BH   | BL    | 4    | BH   | BL    | NA     | –      | G65   | J46   |
| 2013/14 | xls  | 371  | 0   | 12    | 3    | BH   | BL    | 4    | BH   | BL    | NA     | –      | G65   | J46   |
| 2014/15 | xls  | 371  | 0   | 12    | 3    | BE   | BI    | 4    | BE   | BI    | NA     | –      | I68   | L49   |
| 2015/16 | xlsx | 444  | 0   | 8     | 3    | CU   | DB    | 3    | CX   | DE    | 3      | FX     | H67   | K48   |
| 2016/17 | xlsx | 446  | 0   | 8     | 3    | CU   | DB    | 3    | CX   | DE    | 3      | FX     | H67   | K48   |
| 2017/18 | xlsx | 445  | 353 | 8     | 3    | CU   | DB    | 3    | CX   | DE    | 3      | FX     | H67   | K48   |

- *year*—period covered in report
- *link*—link to data file
- *rows*—number of rows (not all are local authorities though!)
- *las*—number of local authorities (i.e. not ones with class “O”)
- *first*—first row of data on sheets 3,4 and 5
- *e.sh*—which sheet are expenditures on
- *e.on*—which column on street expenditures
- *e.off*—which column are off street expenditures
- *e.cc*—which column are congestion charge expenditures on (row = Greater London Authority)
- *i.sh*—which sheet are incomes on
- *i.on*—which column on street incomes
- *i.off*—which column are off street incomes
- *i.cc*—which column are congestion charge incomes on (row = Greater London Authority)
- *pen.sh*—which sheet are penalty charge incomes for LAs on
- *pen.on*—which column are penalty charge incomes for LAs
- *pen.l*—which cell is the total Penalty charge notice income for on street parking data on in sheet 2
- *tot.1*—which cell is the Net current expenditures for Total transport and Highways services on in sheet 2

## England–Budget

| year    | link | rows | first | las | budg.tot | budg.la |
|---------|------|------|-------|-----|----------|---------|
| 2008/09 |      | 0    | 0     | 0   | -        | -       |
| 2009/10 |      | 0    | 0     | 0   | -        | -       |
| 2010/11 | xls  | 444  | 10    | 353 | E27      | U       |
| 2011/12 | xls  | 444  | 10    | 353 | E28      | V       |
| 2012/13 | xls  | 444  | 10    | 353 | E28      | V       |
| 2013/14 | xls  | 444  | 10    | 353 | E28      | V       |
| 2014/15 | xls  | 444  | 9     | 353 | F34      | U       |
| 2015/16 | xls  | 444  | 9     | 353 | F34      | U       |
| 2016/17 | xlsx | 443  | 8     | 353 | E35      | U       |
| 2017/18 | xlsx | 446  | 8     | 353 | E35      | V       |
| 2018/19 | xlsx | 443  | 8     | 353 | E35      | V       |

- *year*—period covered in report
- *link*—link to data file
- *rows*—number of local authorities
- *budg.tot*—which cell on sheet 2 is the total budgeted surplus in
- *budg.la*—which column on sheet 3 are the LA parking budgeted surpluses on