Case Study November 2017

R4 WASTE COLLECTION AND RECYCLING LIMITED (R4)

Programme

- Introduction to the Case Study team

- The Case Study Exam: generic & specific factors – November 2017 – R4 Waste Collection and Recycling Limited (R4)

- Marking the Case Study (November 2017)

- Consideration of the marking grid

- Feedback re Case Study Learning Materials

- Q & A panel

THE CASE STUDY EXAM

1 February 2018

ICAEW November 2017 Case Study

- The 2017 Case Study exam in context

- Case Study exam results overview

- Tutors' comments

- Advance Information (AI): case scenario

- Exam Paper
  - Requirements
  - Additional information

- Assessment factors

A qualification worth achieving

- November 2017 Case Study pass rate 75.2%

- Some candidates may interpret this as "guaranteeing"

  - "that 3 out of 4 candidates pass each time"

    therefore

  - "<u>any</u> candidate has a <u>*good chance*</u> of passing"

- An alternative (and probably more realistic) view is:

  - "1 in 4 of all candidates fail"

- Candidates ought always to be aware of this 2nd alternative rather than believe *"the odds of passing are in my favour"*.

Case Overview

R4 Examiners' report (extracts)

- R4 is a company engaged in the waste collection and recycling business

- R1 financial analysis & depreciation issues (part of AI board concerns)

- R2 financial data analysis: new SEWCO proposal (an expected topic?)

- R3 commercial analysis of an existing operational issue (numbers / conflict)

- Not quite an even spread of grades R1 = R2, R3 (-)

- As usual <u>some</u> evidence of time pressure

  - Caused by Case Study material: too broad? too deep/complex?

  - Caused by the nature of the requirements?

  - Self induced?

Process of today: examiners / tutors / candidates

- Examiners need to emphasise certain facets of exam practice to candidates – can only do that through tutors
- The tutors are thus in the role of "proxy" candidates
- Examiners *believe* tutors could pass /have passed the CS
- Tutors have to feed any "useful" ideas to candidates
- Tutors also have questions "qua tutor"
- This means that today is two-level process

Tutors' comments

Scenario

R4 is a company that provides two services:

1 – collection of rubbish, from commercial premises or festival sites.

2 – dealing with that rubbish, either by transporting to landfill, or, processing at its main site where valuable recyclables can be sorted, crushed, baled and sold

The company's revenues arise across 4 streams, which can be grouped under the headings of mixed waste (materials that can be largely recycled and sold onwards) and general waste, which goes to landfill.

Tutors' comments continued …

- The first challenge that candidates faced was to grasp a firm understanding of how the business made its money. The recycling of mixed waste presented an unusual situation where the business could earn revenue at the start and the end of the recycling process, with various costs sandwiched between these two points.

- The company had recently invested heavily in a new materials recovery facility. This had allowed the business to process its own recyclable materials more efficiently and to also provide a service to other third party waste collectors who paid a gate fee to use R4's facility. However the severity of the investment and the subsequent increase in working capital requirements had placed a strain on the company's finances.

Tutors' comments continued …

- The AI presented candidates with a range of … well-presented examples [which] enabled the candidates to walk through calculations that would ultimately form the basis of the numerical analysis that they would be required to perform in the exam.

- The abundance of numbers provided in the AI offered candidates the opportunity to identify these figures. However many students still required guidance with this task.

Tutors' comments continued …

- Later exhibits also highlighted a number of concerns that had been raised by the board of directors. These included concerns regarding the size, calculation and impact of depreciation estimates. Diligent candidates will have taken the opportunity to consider the impact that changes to depreciation would have on the financial statements. Candidates (or even tuition providers) who glossed over this concern, or dismissed it as a red herring, did so at their peril.

- One notable omission from the AI was a lack of any real discussion of the directors' future plans. However this reflected the company's tentative cash position which would have realistically prevented the business from achieving any significant ambitions in the short term.

Tutors' comments continued … Requirements

Requirements

- There was a lot of data presented in this case. However, as long as the instructions in Exhibit 15 were read clearly eg 'revenue and gross profit, both overall and individually for the two revenue streams: mixed and general waste', were understood, and adhered to, this exam was perfectly feasible.

- This was an exam paper which provided a fair test of candidates' professional skills and knowledge of the information provided in the AI.

- Overall, the exam requirements were clear and not unexpected.

Tutors' comments continued … R1

- An analysis and explanation of financial performance (revenue, and gross profit) on an overall business basis, and, on a mixed v general waste business.

- This is very much in line with past exams and should not have been problematic.

- The schedule in Note 1 to the 2017 financial statements, along with the commentary in Exhibit 17 should have helped students explain why overall revenues were growing, whilst gross margins had slipped slightly.

- Whilst not mentioned in the EP students will have been expected to comment on two key metrics highlighted in the AI
    - the 40% recycling target (met) and
    - the 25% margin on mixed waste (missed).

Tutors' comments continued … R1

- Nearly all the key data that could be calculated from the table in Note 1 was in fact given to candidates, reducing the time they had to spend on Appendix 1.

- Given the possible scenarios that could have been used to assess candidates' understanding of R4's financial performance, this one was well flagged in the Advance Information.

- With only revenue, GP and depreciation to discuss, and not too much additional information in the Exam Paper, well-prepared candidates should not have found this too testing.

Tutors' comments continued … R2

- An evaluation of a significant SEWCO contract from OB1, a festival organiser. This required a two-step calculation to begin with. Firstly how much revenue and profit would the proposed large contract yield. Secondly, on the assumption that the contract required exclusivity, what would its incremental impact be on the 2017 SEWCO business.

- In R2 students needed to critically evaluate the assumptions being made, for instance in R1 we were told that recyclate rates had risen, yet in R2 we were presented with 2016 sales prices.

- Candidates had to discuss the commercial considerations including business trust and ethical issues. The calculations were straight forward given the pro-formas in the Advance Information

- R2 provided an opportunity for candidates to, in many ways, recycle their own preparatory work. The examiners had even generously calculated the expected revenue per tonne from mixed recyclates.

- R2 was another very fair requirement. Candidates who had performed sufficient preparatory work with the information provided in the AI would have found this question very appealing indeed.

Tutors' comments continued …R3

- Previous exams have focused largely on an assessment of opportunities facing a business at this stage, whereas this question asked was centred round problems.

- The first exhibit in the AI highlighted that they may be asked to evaluate business opportunities or risks. Also this business was hardly in a position to be considering too many ambitious long-term plans given its cash limitations.

- It is common place that Chartered Accountants find themselves advising clients on as many problems as they do opportunities in the real world. So this requirement will provide good practice for many of the candidates' future careers.

- In keeping with previous sittings, candidates were asked to evaluate financial, operational and strategic factors, including any business trust and ethical issues. They were also asked to provide appropriate calculations.

- With two media articles for use in the discussion of business trust and ethical issues, the content of Requirements 2 and 3 is becoming more alike, the only difference being the relative emphasis on the calculations (in Requirement 2) and the discussion (in Requirement 3).

Tutors' comments continued …Overall

- This was an exam paper which provided a fair test of candidates' professional skills and knowledge of the information provided in the AI.

- The exam contained no nasty surprises and the vast majority of candidates will be very pleased with the requirements. Time management and careful selection of calculations in Requirement 1 will be pivotal to success.

- There was plenty of information in the Exam Paper for candidates to use in their discussions for Requirements 2 and 3

- Candidates were not asked to do anything unfair or outside their capabilities.

- All issues within this Case were discussed and foreseeable upon analysis of the AI and students should have been well prepared.

AI Case Scenario: Key Exhibits

- Candidate's (Nik Harris) role & work within Boyle Downer (BD) (Exhibit 1)

- Key operations and financial facts/story (Exhibits 2, 4, **5**, 6 - 10)

- Key issues history & strategy (Exhibits 3, 4, 6, 11)

- Business line issues
  - Material Recycling Facility (MRF) (Exhibit 7)
  - Industrial and commercial (I&C) recycling operations (Exhibit 8)
  - Special Event Waste Contract Operations (SEWCO) (Exhibit 9)
  - Recycling network arrangements and 3rd party contracts (Exhibit 10)
  - Key 3rd party contractors (Exhibit 11)

- Strategic, operational and issues of understanding (Exhibit 12)

- MRF targets and operational issues (Exhibit 13)

- Broader scenario issues (Exhibits 2, 3, 12,14)

Candidate preparation beforehand

- AI – read / analyse / know the numbers / could précis all aspects **CANDIDATES MUST "OWN" THE Case Study**

- "Own" Research – minimal: current topics (abundant!) / but check on any wording difficulties / just be aware *(especially re tutor "**predictions**" preparation)*

- A candidate should be able to summarise the case (exhibit by exhibit and overall) – in *their* own words – before the exam

- A candidate must know *the detailed financial story* of any case completely (but especially this one) *(fluently)*

Exam Paper: Additional Information

- Candidate's tasks (Exhibit 15)

- Financial statements and notes (Exhibit 16)

- Email: operational & financial issues (Exhibit 17)

- Email: new SEWCO proposal from OB1 (Exhibit 18a)

- Recent media articles (Exhibit 18b)

- Email: 3rd party contractor/operational issues (Exhibit 19a)

- Recent media articles (Exhibit 19b)

Exam Paper: Requirement 1

- Review R4's 2017 management accounts

  - Revenue & GP overall and individually for the two revenue streams: mixed & general waste (v 2016)

  - respond to the request for advice from the R4 board concerning depreciation and its impact

  - *context is R4's 2017 increase in activity but profit relatively flat; marginally improving but weak cash position; and bank loan repayment timing*

Exam Paper: Requirement 2

- An assessment of new SEWCO proposal

- Calculate the possible results without/with exclusivity

    - question all assumptions against existing financial facts

    - discuss: - adequacy of assumptions

        - operational issues

    - whether to accept? any negotiation? BT&E?

- *Context is overall size of contract; R4's business operations; cash position; OB1 business culture*

Exam Paper: Requirement 3

- Evaluation of the issues affecting 3rd party contract

- Perform commercial analysis: financial, operational & strategic issues (including business trust & ethical issues)

- Evaluate overall implications for R4: recycling targets and financial considerations

- Provide appropriate calculations to support the evaluation

- *Context is R4's profit and cash position and the materiality of this 3rd party's (LWC) contracts in total*

Essential steps for candidates…

- **START: read EP carefully:** *try to avoid being "surprised"; consider links to AI!*

- **PAUSE** & **REFLECT**!! (R4 is your "**client**")

- **DERIVE** **updated** overview of R4 from EP (think / precis)

- **PLAN** *(think through, find key points, identify **any** links throughout the EP)*

- **WRITE** *(clear, focused, concise, legible)*

- **ANSWER** THE QUESTION **ASKED** !!

MAIN CAUSES OF FAILURE

- **Poor <u>knowledge</u> (poor preparation – no excuses!)**

- **Poor <u>assimilation</u> (not focussing / scattered / panic)**

- **Poor <u>timing</u> (practice / concentration)**

- **Poor <u>legibility</u> (speed / focus on clarity)**

- **Poor <u>clarity</u> (unclear sentences / structure …?)**

Appendix 1

Revenue	2017 £000s	2016 £000s	Change £000s	Change %	2017 Mix %	2016 Mix %
Mixed waste						
I&C operations	8,745	7,703	1,042	13.5	15.8	15.1
SEWCO	6,005	6,713	(708)	(11)	10.8	13.2
3rd party waste collectors	5,473	4,370	1,103	25.2	9.9	8.6
Total mixed waste	**20,223**	**18,786**	1,437	7.6	36.5	36.8
Total general waste	**35,131**	**32,212**	2,919	9.1	63.5	63.2
Total revenue	**55,354**	**50,998**	4,356	8.5	100.0	100.0

Appendix 1 *(continued)*

Gross profit	2017 GP £000s	2017 GP %	2016 GP £000s	2016 GP %	Change £000s	Change %
Mixed waste						
I&C operations	1,830	20.9	1,478	19.2	352	23.8
SEWCO	2,085	34.7	2,456	36.6	(371)	(15.1)
3rd party waste collectors	1,026	18.7	619	14.2	407	65.8
Total mixed waste	**4,941**	**24.4**	**4,553**	**24.2**	**388**	8.5
Total general waste	3,746	10.7	3,493	10.8	253	7.2
Total GP	**8,687**	15.7	**8,046**	15.8	641	8.0

Appendix 1 continued

Tonnage	2017	2016	Change	Change
Mixed waste	tonnes	tonnes	tonnes	%
I&C operations	31,492	28,350	3,142	11.1
SEWCO	9,654	11,475	(1,821)	(15.9)
3rd party waste collectors	48,866	41,216	7,650	18.6
Total mixed waste	90,012	81,041	8,971	11.1
General waste				
R4 general waste collection	129,024	120,960	8,064	6.7
SEWCO	6,012	3,825	2,187	57.2
Total general waste	135,036	124,785	10,251	8.2
Overall total	225,048	205,826	19,222	9.3
Mixed waste proportion of total waste	40%	39.4%		

***Appendix 1** continued*

Effect of change/increase in depreciation by £500k on management accounts

1. SP/L: OP/ PBT will decrease by £500k; less tax effect of £100k (assuming 20% tax) to give a PAT of £301k

2. SOFP: Non-current assets will be lower by £500k to £13,867k

3. SOFP: Retained earnings will be £400k lower at £2,420k

4. SOFP: Trade and other payables (including tax) will go down by £100k to £6,001k

5. SCF: no overall effect (any changed depreciation is added back to the changed PBT)

Appendix 2 OBI / SEWCO

		£000s	
OB1 SEWCO Revenue	£335 x 30,000	10,050	
Recyclate revenue	£220 x 18,000	3,960	(396)
		14,010	**13,614**
OB1 SEWCO Collection costs	£315 x 30,000	(9,450)	
Recyclate costs	£91 x 18,000	(1,638)	
Total OB1 GP in 2018		2,922	20.9%
Reduction because some might be non-recyclable (10%)		(396)	
Net OB1 gross profit in 2018		2,526	18.6%

Issue of foregoing all other SEWCO

Based on 2017	**Revenue**	**Quantity**	**C of S**	**GP**	
	£000s	tonnes	£000s	£000s	
Mixed waste	6,005	9,654	3,920	2,085	34.7%
General waste	1,954	6,012	1,894	60	
Total SEWCO	**7,959**	**15,666**	**5,814**	**2,145**	27.0%

Exclusivity analysis

	OB1	**SEWCO**	**OB1-SEW**
	Tonnes	**Tonnes**	**Tonnes**
Total tonnage	**30,000**	**15,666**	**14,334**
			Change
	£000s	**£000s**	**£000s**
Total revenue	**14,010**	**7,959**	**6,051**
Total GP	**2,922**	**2,145**	**777**

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Appendix 3 (Workings) R4 / LWC / FP contract (R3)

LWC / FP mixed waste processing		Normal per tonne	FP per tonne
Revenue		£	£
Gate fees for LWC **mixed** waste (per tonne)		20	20
Sale LWC recyclates (per tonne - see below)		78	68
		98	88
MRF costs			
MRF total cost per tonne (increased by 15%)	£91 x 115%	(91)	(105)
(even £91 gives a loss)			
GP per tonne recycled on contract		7	(17)
Total loss from LWC / FP contract since July 2017	(10 x 7 x 13)	910	(15,470)
		tonnes	gross loss

FP LWC recycling comprises paper and cardboard (2:1) with different prices
(see example Ex 10 page 33)

	Composition per tonne	Sale price per tonne	Average per tonne
	%	£	£
Paper (AI)	60	80	48
Cardboard (AI and EP)	30	100	30
Recyclable	**90**		**78**
Non-recyclable coffee cups (say)	10	(100)	(10)
Total	**100**		**68**

Per 2017 value of all LWC contracts worth an estimated 33.9% of all 3rd party

(16,500/48,666) % = 33.9%

3rd party waste collector revenue in 2017	**Total**	**LWC**
	£000s	£000s
3rd party gate fees	977	331
3rd party recyclate sales	4,496	1,524
	5,473	1,855
Related MRF costs in 2017	(4,447)	(1,508)
GP	1,026	347

LWC as proportion of total mixed waste tonnes processed
16,500/90,012   18.33

- R4 may lose £347k of gross profit
- The MRF would be operating less efficiently
- R4 may not hit the 41% target

Planning in the CS Exam

- Use the time as suggested *and **WATCH THE TIME!!!***

- Carefully read requirements – make sure you understand ALL you are being asked to do

- Plan your answer – however works for you (in **total** /**sections**) – ***WATCH THE TIME!***

- Do calculations neatly as appendices – *include the relevant numbers in the report*

- Write the answer clearly

- Quickly read your answer – check plausibility / tact – ***WATCH THE TIME!***

ANSWERING THE QUESTION

- Use the breakdown of the requirements

- Answer ALL parts of the requirements but ONLY the requirements asked

- Marks are split equally between Requirements – so the report/answer presented should reflect that

- Tailor your answer to the question asked – make any "context" you provide relevant

- Do not answer the question that you have prepared (or *[worse still]* that the tutors might have guessed and have prepared)

Presentation of the report

- MAKE IT LEGIBLE

- Don't irritate the markers...

- Use appropriate language for audience

- Stick to accountant-appropriate subjects

- Make numbers clear

- Consider format (headings / length)

- Marks are awarded for quality not quantity

Some common reasons for failing

- Not finishing the exam: only answering two Requirements fully (or at all)

- Presenting an unbalanced report / no ES

- Not answering / attempting **all** sections of any Requirement

- Poor appendices and, from that, poor analysis

- Inability to perform simple calculations correctly

- **Illegible writing** (impossible for markers to read)

- Lack of demonstrating appropriate judgement

- Failure to conclude appropriately

- Failure to make sensible recommendations (*lobby the UK government re general waste costs?!? Try to increase the level of mixed waste recycling!*)

In conclusion …

- No fixed pass percentage (does not have to be 75% or whatever) … *could be less!*

- Should not judge own preparation / standards against only your "peers" or your "peer group"

- Candidates must remember that they are up against the "best" (*in the world!*)

- Examiners are not assessing candidates against the lowest possible standard

- It is a <u>world-class</u> qualification – ***worth having***!

CASE STUDY MARKING WORKSHOP

1 FEBRUARY 2018

Introduction and Objectives

- Objectives

    - Familiarity with CS key and terminology

    - Understanding of CS marking procedure

    - Key training points and practice marking

- Not aiming to do full CS marker training

Competency Based Assessment

- Grades relate to demonstration of professional skills

- Four competencies (plus NA – Not Attempted)

  - CC – Clearly Competent

  - SC – Sufficiently Competent

  - IC – Insufficiently Competent

  - ID – Insufficiently Demonstrated

- Marked by reference to carefully chosen bullet points

- CC and SC are passing grades

- All scripts will be a mixture of grades (CC….NA)

The Marking Key

A total of 40 boxes:

- Executive Summary

- Requirements - equal weight, same skills grid

- Overall – appendices, structure, style & language

Marking key is written after much deliberation

Marking key aims to reward good scripts

Marking key is not the 'right' answer to the CS

Executive Summary

- Stand-alone document (no cross-marking)

- KEY numbers, issues and results

- It is a conclusion (don't need conclusions in each section)

- Approximately 1 typed page in length

Skills Columns - AUI

- Assimilating and Using Information (AUI)

  - Demonstrate <u>knowledge</u> of case material

- By:

  - Using relevant information from AI and EP

  - Basic calculations

  - Wider business issues

  - Relevant background (not too much)

  - Own research is now rewarded where relevant

Skills Columns - SPS

- Structuring Problems and Solutions (SPS)
  - Present relevant <u>analysis</u> of problems and/or proposed solutions

- By:
  - Doing <u>relevant</u> calculations (in appendices)
  - Performing quality analysis – compare figures, suggest explanations, consider assumptions, consider ethical/business trust facts
  - Covering all the question parts

Skills Columns - AJ

- Applying Judgement (AJ)
    - Apply <u>judgement</u> on own analysis or assumptions provided
- By:
    - Evaluating key points – *say why they are key*
    - Implications of the analysis – *this means…*
    - Limitations and linkages between issues
    - Possible bias / scepticism *(or say why no bias)*
    - Ethical/Business Trust points – evaluation, impact and recommendations

Skills Columns – C&R

- Conclusions and Recommendations (C&R)
  - Draw <u>conclusions</u> and make practical and commercial <u>recommendations</u>

- By:
  - Drawing conclusions (under a <u>heading</u>)

    Think about the question; make sure you cover all of it

  - Considering all options, give reasons for picking one (generally no right or wrong answer)

  - Making case-specific, action-point recommendations on a number of areas

Skills Assessment Boxes

- Skills assessed using bullet points:

    - Examples of evidence of a skill

    - Range of difficulty

    - Different numbers of bullets in boxes

'Standard' boxes usually have 5 bullets (3 out of 5 = passing grade)

'Easier' boxes may have only 4 bullets (3 out of 4 = passing grade)

'Trickier' boxes may have 6 bullets (3 out of 6 = passing grade)

Bullets -> Grade

- Bullets -> competency assessment

  - 0 bullets = NA

  - 1 bullet   = ID

  - 2 bullets = IC

  - 3 bullets = SC

  - 4 or more bullets = CC

- Points must be clear and in context

- Don't need exact wording – we reward the understanding

- Lots of marking 'rules' to ensure objectivity

Marking Procedure

- LEARN THE KEY to mark efficiently & effectively

- Read once through script - marking to the key

- Audit trail – every point needs page and line ref

- No cross-marking between sections

- Mark Requirements in turn (including appendices)

- Complete the back page as you go

- Add up grades per page on bottom right

- Transfer totals to front page and cross-cast

Actual Marker Training

- Marker Selection – 1 day - training, 2-3 scripts

- New Marker Training – 1 day (including admin) 1 script

- Plenary – review of case by Examiners

- Detailed training points by TLs (2 to 3 hours)

- Two practice scripts with 'agreed keys'

- Four practice scripts plus peer and/or TL review

- Total training – 4 days and 9 practice scripts

- TL monitoring and feedback during marking

Exercise – Requirement 1

- Training points (as in marking school for R1)

- Mark Requirement 1 – including audit trail

- Review in small groups

  - Look at each skills box

  - Compare with 'agreed' key

  - Look up references for any points given/missed

  - Discuss differences of interpretation in group

  - Ask if still unclear

Introduction and Objectives

- Objectives

    - Familiarity with CS key and terminology

    - Understanding of CS marking procedure

    - Practice marking

- Not aiming to do full CS marker training

CASE STUDY

INTERPRETING THE MARKING KEY

Determining the Necessary Quality to Pass

Reflective process comprising:

- Position in the marked ranking

- Coverage of the requirements

- Quality of the answer to each requirement

In order to determine an overall sufficiency of competence

Conversion of Grades to Raw Marks

CC	6
SC	4
IC	2
ID	1
NA	0
40 boxes	240 raw marks

What is Sufficiently Competent?

It is **<u>not</u>**…

…simply more than 120 raw marks or 50% competent grades (SC or CC) overall

What is Sufficiently Competent?

Indicated by:

- More than 50% of the achievable competent grades in **each** of the requirements [including Executive Summary]

- More ICs than IDs

- Few NAs overall or in any section

QUESTIONS

QUESTIONS

- Why does a student fail: pass/ fail border

- Balance of the requirements (to pass)

- Conclusions and recommendations

- Other professional skills (headings):
    - **NOT** "Professional scepticism / provenance"

- Business trust / ethics

- Continuing numerical element to R3

CONCLUSION

Key messages

- Key to success is in developing good case study skills in the candidates

- Candidates must answer the requirements set

- Candidates must WATCH THE TIME

- Sitting/Marking mock exams can identify some candidate weaknesses BUT it is not easy to replicate the actual exam sitting/marking process

- Candidates fail on the day for the reasons discussed

- Set clear objectives for the purpose of mock exams:
  - look at writing style and legibility;
  - check timings (make the candidates specify when they started writing each section);
  - check content