

CHAPTER EIGHT:

CONCLUSIONS

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8.1 Introduction

This chapter concludes this study on managing solid waste in an environmentally- responsible way in the context of the small Welsh hotel sector. It opens up with a review of the research objectives and provides an overview of the research major findings. The chapter then moves onto outline the significant contributions of the study to theory and practice. It highlights the limitations of the study and identifies opportunities for further research. The chapter ends up with the researcher's final thoughts and reflections on the research process.

8.2 Review of objectives and major findings

8.2.1 Objective 1

Undertake a critical review of relevant literature on SWM and small hotels to explore the different alternatives which small hotels could use to manage their solid waste, the issues facing them in implementing sustainable SWM practices and to develop a conceptual framework to guide this research.

This objective was achieved through undertaking a thorough critical analysis of relevant literature on SWM concerning small hotels. Reviewing the literature has given a better understanding of tackling the environmental responsibility by small hospitality businesses, the way they tend to manage their solid waste, the barriers and the drivers to environmental performance improvement. It was clear from the literature that most small hotels observed their environmental responsibility as a peripheral activity; with the majority of

small hotels were thinking individually of their impact on the environment while ignoring their cumulative impact. Nevertheless, the literature highlighted that EMS – certified hotels, such as GDES, were paying more attention to their environmental responsibilities and inclined to undertake eco-friendly practices to reduce their impacts on the environment rather than non-green hotels as one would expect. The literature addresses also some of the theoretical frameworks which were widely used to understand people behaviours in relation to environmental issues (TRA, TPB and ITB).

The waste management hierarchy is one of the key issues that have been largely emphasized in the literature to be deployed as the base for managing solid waste in small hotels. The varied concepts, avenues and difficulties for implementing all the options listed in the waste hierarchy, starting with prevention of the waste all the way through to dispose of the waste into landfill, had been explored. It was apparent that landfill was the dominant waste strategy in Wales and all over the UK as it was the most accessible and cheap waste alternative for all waste producers. The landfill tax in the UK remains ineffective as a mean of discouraging landfill and drive small businesses to make use of other sustainable SWM alternatives.

Another key issue that has been addressed in the literature is that the PTB systems in the UK were confined to packaging and electronic waste. Nevertheless, the packaging system was built upon excluding small business end users from the cycle and the WEEE system depended largely on

negotiations with retailers. Accordingly, small businesses in the UK are not able to take-back their products for recycling in comparison to other European counterparts, such as Switzerland and Germany. The critical review of the issues, concepts and opinions revealed in the literature provided the basis for the development of a theoretical model of best practice for SWM in small hotels (see Figure 2.12).

8.2.2 Objective 2

Investigate SWM practices in non-GDES small hotels in a Welsh local authority and explore the support available to them from the local authority and the private waste sector to manage their solid waste in a sustainable way.

This objective is linked with answering three main research questions addressed in this thesis: What are the challenges of implementing sustainable SWM practices in small hotels? How could public and private waste carriers support small hotel owners/managers in managing their solid waste effectively? What could influence the behaviour of small hotel owners/managers to manage their solid waste appropriately? (see section 1.3). To accomplish this objective and answer these aforementioned research questions, an exploratory case study of non-GDES small hotels was researched in a Welsh local authority to explore SWM practices in non-GDES small hotels and focus on the support available to them from the waste carrier either the local authority or the private waste sector. A summary of the major findings of this objective are given under two main headings, as follow:

- **SWM in non-GDES small hotels in a Welsh local authority**

Careful analysis of the findings revealed that most of the sustainable alternatives of the waste management hierarchy had very little or no applications in the non-GDES small hotels, which was expected, especially in comparison to GDES small hotels. An initial model for SWM in non-GDES small hotels was developed based on the findings obtained by interviewing non-GDES hoteliers (see Figure 4.3). In essence, a few hoteliers were positive and take an action to manage their solid waste effectively. Nevertheless, the majority of non-GDES hoteliers did not explore prevention, minimisation, reuse, recycle and compost and even felt negatively about these options, except recycling. Despite being the most undesirable SWM option, landfill was still used as the main waste strategy for disposing hotel waste by most hoteliers.

The findings of this case study also informed the design of a revised model for SWM in non-GDES small hotels following the introduction of improved SWM practices by the local authority for the support of businesses (see figure 7.1). The model identified the real attitudes of hoteliers, particularly towards recycling, which they successfully managed to hide in the initial interviews with them by showing favourable attitudes and reasoning that the service was not available. However, the results revealed no change to SWM practices in non-GDES small hotels after they had the recycling service from the public sector, which formerly constituted the most significant barrier to their behaviour. Most hoteliers still implemented landfill as a primary waste

disposal route believing that small hotels produced a small amount of waste which would have no or minuscule impact on the environment. The findings implied that powerful legislative and economic motivations needed to influence hoteliers' behavioural intentions and drive them to manage their solid waste effectively.

Most hoteliers believed in enforcing rather than encouraging staff participation in hotel's SWM programme. A few hoteliers indicated that staff should be made aware of their responsibility in managing hotel waste and provided with the tools necessary to fulfil their duties. In the same way, most hoteliers discouraged customer participation in hotel's SWM programme believing that it was impolite to urge customers to segregate their waste. However, a few hoteliers were positive towards such activity believing that most customers would be interested. Moreover, almost all hoteliers refused to take part in any potential PTB system in the UK reasoning that there would be a time, space and cost constraints to follow up this route. Only one hotelier had demonstrated favourable attitudes towards PTB systems. In essence, networking was a concept which was lacking the desirability by many non-GDES hoteliers because of the competition factor. However, some hoteliers had showed positivity towards networking to cooperate with other small hotel operators and exchange ideas and information on SWM.

- **SWM operations by the public and private waste sector**
 - (1) Public sector**

The findings highlighted a gap between the public sector's waste strategy and practices. Although the council had waste prevention/minimisation targets set by WAG in the Welsh waste strategy 2002 they were unable to work with businesses in regards to achieving these targets. They currently considered their waste prevention/minimisation targets as secondary objectives signposting businesses, if asked, to other specific support organisation to help them with these targets. Actually, the local authority did not have the resources and the experiences necessary to deal with businesses and help them prevent/minimise their waste.

On the base of recycling, the authority developed a recycling system for commercial businesses in 2006 offering cardboard, glass and mixed recycling schemes after a long time focusing only on domestic recycling. The mixed recycling bag was an appropriate scheme for small hotels to recycle their waste as it did not require hoteliers to separate the waste but not to contaminate it and thus eliminating most of the obstacles declared by hoteliers in terms of segregating waste materials, i.e. time, space etc. The authority confronted a range of obstacles in recycling commercial waste but they prevailed over and committed themselves to collect recyclable waste from any business wanted to recycle. Also, the local authority's officers showed more interest to investigate the process of networking small hotels when developing their future strategies to get them working together and also localise their waste separation systems.

Furthermore, the local authority could not work with small hotels in respect of composting because they still had not got a closed windrow plant to compost food waste. They ignored their composting targets set by WAG and even provided very modest service to enhance their in-house composting programme, which limited only to providing advice on request. Officers identified cost and legislation as the main tools to drive small hotels as well as other commercial businesses to manage their solid waste effectively. However, the cost of recycling offered by the public sector was still not encouraging for most hoteliers because they would not recycle to just save 13p a bag. Moreover, the local authority's officers believed that it was difficult to work in a partnership with the private waste sector on the base of reducing commercial waste sent to landfill because they had different targets.

(2) Private waste sector

It was clear that most private waste companies could not work with small hotels in terms of prevention/minimisation of their waste as they perceived these targets as hindrance to their profit-making objectives. In essence, some larger waste companies provided a third-party experience to support businesses in terms of prevention/minimisation of their waste but they confined such services to industrial waste producers which were not the case with small hotels. Moreover, many private waste companies were found very keen to recycle but they experienced a range of difficulties in recycling (e.g. lack of recyclable markets) and thus they asked for governmental support. Similarly, the private sector could not assist small hotels in respect of

composting as they did not have composting facilities in Wales or even intentions to invest in composting believing that it was difficult and unprofitable business. Yet, the majority of small waste carriers were still landfilling.

The findings informed a range of tools that could be used to drive private waste carriers to work with businesses in terms of all the waste hierarchy options, including: increasing the landfill tax; enacting legislation for recycling; setting recycling and composting targets for each waste company; customer demanding of the service. However, the government should not consider these tools until they make recycling and composting an attainable opportunity, for example by building waste transfer stations and securing recyclable markets for each waste streams.

8.2.3 Objective 3

Explore the attitudes of the owners/managers of GDES small hotels regarding the implementation of more sustainable SWM practices and comparing them to the non-GDES small hotels studied in the second objective.

This objective seeks to address three questions of the main focus of this thesis, including: How do small hotels committed to GDES manage their solid waste? Does GDES support hoteliers in relation to SWM? What could influence the behaviour of small hotel owners/managers to manage their solid waste appropriately? (see section 1.3). This objective was fulfilled by

developing an embedded explanatory case study of small hotels committed to GDES in Wales to identify SWM practices in GDES small hotels, determine hoteliers' attitudes and the rationale behind the implementation of more sustainable SWM practices and explore the support available to them from Arena Network.

A modified model for SWM in GDES small hotels was presented as a result of hoteliers' beliefs, attitudes and comments which were captured through semi-structured interviews with them (see Figure 5.4). Most GDES hoteliers were more committed to tackle their environmental responsibility which demonstrated three main issues: developing an environmental policy, undertaking an environmental audit and setting an environmental improvement plan. They considered different means to measure the effectiveness of their hotels' environmental performance and continuously worked towards the improvement. As Arena Network lacked the funding to work with GDES organisations some hoteliers sought help and advice from other business support organisations such as Carbon Trust and Envirowise.

The waste management hierarchy had been used as a guiding principle to shape SWM practices by most GDES hoteliers. They were targeting the waste hierarchy in its significant order of alternatives, starting with prevention of waste at source. They had a green purchasing policy developed mainly to protect the environment by purchasing eco-friendly products and from local suppliers. Nevertheless, some hoteliers felt negatively about prevention and

agreed with the view of non-GDES hoteliers that there was a difficulty in buying eco-friendly products because of the higher prices, quality defects and less variation of green products. Moreover, minimisation and reuse alternatives were highly prioritized by all GDES hoteliers undertaking various practices to reduce and reuse hotel waste streams.

Most GDES hoteliers were very keen to recycle with the majority of them followed an illegal route for recycling, despite knowingly their legal obligations in relation to SWM. In practice, most hoteliers overcame the internal constraints but 'lack of the external facilities' was one of the real barriers facing GDES small hotels in either recycling or composting. Many hoteliers were very interested to separate food waste for composting but they had not got an access to a composting facility by either the public or private sector. Indeed, landfill was considered as the last resort by most GDES hoteliers but out of their control landfill represented the main waste strategy for disposing food waste because hoteliers did not have the opportunity to compost or give it to animals for feeding.

Furthermore, most hoteliers appreciated the key role that could be played by staff and customers in a hotel's SWM programme. They also perceived take-back as an effective way to recycle hotel waste. They were eager to participate in any potential PTB system if it incurred no costs to them. Indeed, the need to obtain financial savings, protect the environment, create a competitive advantage and be eligible for having grants were the primary

motivations which led most hoteliers to achieve GDES and manage their solid waste effectively. Finally, most hoteliers believed in developing some sorts of cross links, communications and partnerships between small hotels. A cross-case analysis was then developed in which the key issues arising from both case studies undertaken in this research identified. This led to the development of a best practice model for the public sector to encourage better SWM practices in small hotels.

8.2.4 Objective 4

Make recommendations in relation to SWM strategies appropriate to small hotels.

This objective is connected with the last research question addressed in this study “What are the potential solutions to improving SWM practices in small hotels?” To achieve this objective and answer this research question, the thesis evolved a best practice model for the public sector to enhance SWM practices in small hotels (see Figure 7.4) and proposed an input/output process model for the government to encourage public and private waste sectors to implement sustainable SWM practices (see Figure 6.7). Both models implied a number of recommendations to different associated stakeholders, including: small hotel owners/managers, UK government and public and private sector’s waste carriers, which would add to SWM strategies and assist small hotels to manage their solid waste effectively (as explained in the following sub-titles).

(1) Recommendations to small hotel owners/managers

- An auditing process to hotel waste streams should be carried out either by hoteliers themselves or with the support from the waste carrier to identify sources and quantities of solid waste generated and how the hotel could effectively manage each waste stream produced. Hoteliers should maintain records for waste generation and disposal routes (e.g. waste disposal charts) and continuously measure the effectiveness in managing their hotel solid waste.
- Hoteliers should consider and prioritize the waste carriers who dispose of the waste in an environmentally-responsible manner, (e.g. by recycling and/or by composting) over those who just get rid of the waste into landfill. Hoteliers should also require the waste carrier to help them tackling all the options listed in the waste management hierarchy which in turn would pressurize the waste carrier to provide total SWM solutions.
- The waste management hierarchy should be used by small hotel operators as the base to guide their SWM practices. Hoteliers should consider buying from local suppliers and value the environmental attribute of the product when purchasing to cut down the waste at source. They should next explore the different avenues for reducing and reusing hotel waste to prevent it from entering the waste stream. Afterwards a waste separation programme should be incorporated throughout the hotel for recycling and composting the hotel's general and organic waste. Landfill should be utilized as the last option.

- It is essential to encourage staff participation in the hotel's SWM programme and make them aware of how to manage hotel solid waste by incorporating SWM as a part of the induction training programme. Likewise, customers should be asked to take part and provide them with the tools necessary to maintain their waste not contaminated.

- Hoteliers must understand that solid waste generation is a real threat to the environment and landfill is not the way forward to treat the waste. Nevertheless, by managing it effectively they are helping the environment as well as their businesses in terms of creating economic, social and marketing advantages and also complying with the upcoming regulations.

(2) Recommendations to the UK government

- The success of SWM in small hotels is strongly dependent on the lead which would be given by central government. The UK government should revise its national waste strategy and pay more attention to target and reduce solid waste generation at source by forcing and/or encouraging manufacturers to consider producing clearly-labelled green products and at accessible prices. To achieve the national recycling and composting targets, it is essential also for the government to understand the conditions facing each local authority individually and provide sufficient funds to help local authorities to carry out their waste management activities.

- Small hotel operators lacked the awareness to adopt a proactive SWM behaviour. Thus, it is essential for the UK government to provide more environmental programmes specifically tailored for small businesses the same as Envirowise to enhance their environmental awareness and educate them on how to target all the options listed in the waste management hierarchy. The government should also direct and promote people's attitude since childhood by introducing SWM as a part of curriculum for children to learn in schools and carrying on through secondary and higher education to know the dangerous effects of solid waste on the environment, the problems facing the planet and how to manage solid waste properly. The Brundtland Commission previously commented that *"the environmental education should be widened and should run through other disciplines of the formal education and curriculum at all levels"* (World Commission on Environment and Development (WCED), 1987:113).
- The government intervention is essential to develop a comprehensive PTB system involving a wide range of products and allowing small business end users to take-back their products (e.g. packaging and electronic waste).
- The UK government should continue in its strategy in increasing the landfill tax and consider enacting legislation for recycling to divert the waste away from landfill. This would drive small hotels as well as private waste carriers, particularly small waste haulers, to recycle.

Nevertheless, the government should not think about these drivers until making recycling an accessible opportunity for the producer and the carrier of the waste alike by setting more waste transfer stations, processing facilities and stimulating markets for each recyclable waste stream.

- The Environment Agency should stop issuing waste carrier licenses which permit the carrier to just collect and landfill waste. They should also set strict recycling and composting targets for each waste company based on its waste collection reports which the carrier must submit to the Environment Agency on a quarterly basis.

(3) Recommendations to the public and private sector's waste carrier

- The local authority should encourage small hotel's environmental responsibility and tailor specific SWM training programmes to assist and educate this sector on how to implement all the options listed in the waste management hierarchy and also make them aware of their legal obligations in regards to SWM. In addition, an effective system should be set in place to control small businesses using the domestic waste stream and prevent illegal dumping.
- The environmental programmes such as recycling are also attractive to small hotel operators because of the possibility to create a positive image. Thus, the authority should incentivize small hotels by supporting them to get benefit from managing their solid waste on the marketing side via setting and promoting an environmental

award on annual basis to compensate those hotels that are best managing their solid waste in the locality.

- The local authority should deal with their waste prevention/minimisation targets set by WAG as primary objectives and provide appropriate support, awareness and site visits to audit business's waste streams. They should also develop convenient and easy recycling and composting systems for commercial businesses and consider their in-house composting programme to enable small hotels as well as other commercial businesses to manage their solid waste sustainably.
- The private waste sector either larger or smaller waste companies alike should have the experience, facilities and capability to work with all types and sizes of businesses and help them prevent/reduce, recycle and compost their waste. They should perceive that as a long-term strategy for investment.
- The waste carrier either the public or the private waste sector should provide a cheap recycling service than landfill and encourage businesses to segregate their waste at the first place of generation and support them with the tools essential to do that. The waste carrier should also charge businesses by weight so as to incentivize them to cut down the amount of waste produced.
- The authority should take the lead role and build networks between small hotels to localize waste separation system across streets and

also get small hotel operators to work together and exchange ideas and information about SWM. The authority should also consider developing partnerships with the private waste sector on the base of recycling/composting commercial waste and phasing out of landfill.

8.3 Contributions

8.3.1 Contributions to theory

The study contributed an enhanced understanding of SWM issues in the context of GDES and non-GDES small hotels in Wales and the main issues confronting small hotel sector to move further up the waste hierarchy towards the implementation of more sustainable options rather than landfill. The study added to the growing SWM literature through its review of previous research, generation of new ideas and interpretation of rich data collected from different associated stakeholders in respect of SWM in small hotels. It also boosted the understanding of the potential pressure and support required to lead small hotel sector in the UK to tackle its environmental responsibility and dispose of its solid waste in non-environmentally damaging manner. Moreover, the study had provided an empirical evidence to support the uptake of EMS at the SME level to green the business and implement eco-friendly practices. On an overall basis, the study grounded the theoretical base for SWM in small hotels using a phenomenological approach which would undoubtedly help any researcher wants to investigate further in this field.

A major contribution of this study to knowledge was made by presenting a theoretical model of best practices for SWM in small hotels. The model was developed based on the key issues arisen from critically reviewing a wide range of related literature taking into consideration a number of previous models, particularly of the main concern of this research. The proposed model integrated the main components of TPB to understand hoteliers' attitudinal and normative beliefs along with the barriers facing them to implement sustainable SWM practices (see Figure 2.12). It also emphasized the concept of the waste management hierarchy in targeting hotel solid waste streams, at source (prevention), during the production stage (minimisation) and after generation (reuse, recycle and compost) in order to reach a stage of zero-waste disposed into landfill.

Another significant contribution of this study to theory is the usage of TPB with qualitative research methods by asking open-ended questions to understand and explore more in-depth perceptions about the attitudes and behaviours of small hotel operators towards SWM issues. To date most of the studies which used TPB in social science had used quantitative methods (see Hansen and Jensen, 2007; Davis and Morgan, 2008). Furthermore, the study proved that TPB with its main components (Attitude, Subjective Norm and PBC) was still not adequate in predicting and/or understanding the behaviour of small hotels in relation to SWM. It proposed that a new motivational factor should be incorporated within the main components of the

theory to enhance its effectiveness in understanding SWM behaviours in small hotels (see Figure 7.6).

8.3.2 Contributions to practice

This thesis contributed significantly to practice by introducing a best practice model for the public sector to encourage better SWM practices in small hotels. The proposed model was formed as a result of exploring the beliefs, attitudes and opinions of small hotel owners/managers in two different case studies (GDES and non-GDES) on varied SWM issues involved in this research. It also considered the views of the executives of the public and private waste sector which their role was critical for better SWM in small hotels. The model was also sustained by the evidence revealed in the literature. The proposed model will serve as an effective tool to assist small hotel operators to manage their solid waste effectively and incorporate all the options listed in the waste management hierarchy in handling hotel solid waste streams. It covered seven main steps which were essential to optimize SWM practices in small hotels (see Figure 7.4).

The proposed model emphasized the strong government involvement in supporting, incentivizing and pressurizing small hotel owners/managers to consider their environmental responsibility and use the waste management hierarchy as a guiding principle in handling hotel solid waste streams. It also underlined the potential role of the government in relation to networking small hotels, developing an effective national PTB system and forcing or

encouraging manufacturers to consider producing clearly labelled-green products at accessible prices to support small hotels manage their solid waste sustainably. Moreover, the model stressed the potential role of the contracted waste carrier either the public or the private waste sector to work with small hotel operators and assist them to move further up the waste hierarchy towards applying all the sustainable options in handling hotel solid waste streams.

Another significant contribution of the thesis to practice was that it introduced an input/output process model which could provide the way forward to implement sustainable SWM practices by the public and private waste sector (see Figure 6.7). The successful implementation of the proposed model will undoubtedly have its positive effect on SWM practices in small hotels. The model had emphasized the ultimate role of the government in supporting and pressurizing public and private waste carriers to handle commercial waste streams sustainably. Initially, the government should provide an appropriate support focusing on providing waste transfer stations; processing plants; composting plants; recyclable markets; awareness and education. Afterwards, the government should involve and drive those waste carriers, particularly smaller ones, who were just not interested to stop landfilling by continuously increasing the landfill tax, enacting legislation for recycling and also imposing stringent recycling/composting targets for public and private waste carriers alike.

Indeed, both models developed in this study are going to contribute to the Welsh and the UK's waste strategy and assist partially in achieving the national recycling and composting targets imposed by the European parliament on the base of small hotel sector if they are properly implemented. These models can also be applied specifically in other countries which undertake landfill as a primary SWM strategy and plan to phase out of landfill. They can be updated and new elements can be added to suit different countries' context.

8.4 Limitation of the research

Generally, getting an access to the primary sources of data is not an easy task for any researcher and specifically accessing small hotels in Wales to investigate the area of SWM is very difficult. Many small hotel operators were not interested at all to serve such research purpose. However, achieving a response rate of 41% and 60% for the first and second case study of small hotels respectively is undoubtedly a satisfactory result particularly in qualitative research. The research is limited to study SWM issues in small Welsh hotels. Although it is based on choosing two representative case studies in addition to obtaining such higher response rate cautions must be taken into account when generalising the findings of this research to other incidents as generalisation in qualitative research still an area of great debate.

Much of the results of this study were based on the interviewees' perception and attitudes which might not reflect the reality. To identify the real beliefs and attitudes of small hotel owners/managers particularly in such environmental study are very difficult process as the respondent may show concern and demonstrate favourable attitudes towards the behaviour mainly for ethical reasons while, in fact, internally refusing it. Therefore, the researcher tried to overcome this problem using much of cross-linked questions which were successful to a large extent in revealing the accurate attitudes of hoteliers towards varied SWM issues. In addition, some hoteliers were re-interviewed after they had the recycling service from the local authority to identify if any alteration had been made to their SWM behaviour.

The research had some limitations because of the data. There is still a great ambiguity in the literature on a definition of small hotels using number of rooms or employees as the measure for classification. For the current study, small hotels selected as those having 30 rooms or less to enlarge the research boundary and involve a large number of small hotels as the research was going to serve environmental reasons which were rigorously required, particularly in Wales. It was also difficult to identify the type of the hotel operation from its name as hoteliers use the terms of small hotel, B&B and guest house interchangeably for marketing purposes. For instance, one of the hotels was registered on the website as a small hotel and on another webpage as a guest house while the actual sign of the hotel referred to B&B. Thus, all hoteliers interviewed were asked about the type and nature of the

business to avoid any miss-leading as the study focused only on small hotels. Moreover, there was a considerable problem within the online marketing sources of the data which were not updated with the latest information about small hotels. For instance, some hotels were closed down and others changed the nature of the business however their details remained on the website as being hotels.

8.5 Opportunities for further research

The study is quite complex and comprehensively explored a wide range of issues surrounding SWM not only in the context of GDES and non-GDES small hotels in Wales but also involved other associated stakeholders such as the public and private waste sector. It opens up opportunities and provides some potential research areas for future investigation. One exciting area for further research is to build on this thesis and subject the results for critical comparisons via investigating the issue of SWM in different situations. For instance, focusing on the hotel sector in some other European countries which have an effective SWM system in comparison to the UK's system or focusing on the hotel sector in developing countries such as Egypt, determining how far SWM practices differ than those identified in the present study, the extent of applying the waste management hierarchy in handling solid waste streams and assessing the government support.

Future research could use the developed model of SWM as a tool to improve, evaluate and measure the success of SWM practises in the hotel

sector. The model can be used in its present design or can be further modified to meet different businesses and countries context. This thesis highlighted that customers and staff represented the key players in the hotel's SWM programme. Nevertheless, it did not explore the opinions and attitudes of the customers and staff themselves. This could provide an opportunity for further research to investigate in-depth customers and staff's views and attitudes towards taking part in the hotel's SWM programme and possibly focusing on identifying whether customers would prioritize those green hotels which undertook responsible SWM practices rather than non-green hotels.

The study used qualitative methods to explore in-depth SWM issues in small hotels and assess the effect of other associated stakeholders (e.g. public and private waste sector and Arena Network Organisation). Perhaps another possible area for further research is to investigate SWM practices focusing on larger hotels across the UK and using another methodology, particularly survey method to cover larger populations. This may explore new issues facing the hotel sector in terms of SWM. Also, this study used TPB with qualitative research methods to explore hoteliers' attitudinal, normative and control-based beliefs regarding different SWM behaviours. Possibly, further research can use the TPB model with quantitative research by using hoteliers' positive and negative statements towards the implementation of more sustainable SWM practices, along with the main issues arisen in this study to build up a comprehensive attitude questionnaire to assess hoteliers'

attitudes regarding varied SWM issues. This will give the opportunity to survey a large population and thus enhance the potential for generalization.

Moreover, the study highlighted that the UK government had a strategy to increase the landfill tax by 3% every April. Future research is important to assess the effectiveness of the landfill tax rising in influencing the behaviour of small hotel operators and also the private waste sector, particularly small waste haulers, to stop landfilling. Likewise, the findings revealed a great deficiency in the quality of GDES in relation to the marketing side, the support available and also certifying and monitoring procedures which could be a subject for future research to explore in-depth different avenues to enhance the quality of the standard and thus making it a real opportunity to support the hotel sector undertaking environmentally-friendly practices.

8.6 Personal reflections

This thesis is the outcome of a four-year PhD research study attempting to identify the challenges of implementing sustainable SWM practices in the context of small Welsh hotels. It is my aspiration that the developed best practice model for SWM in small hotels, in addition to the proposed model for influencing the public and private sector's SWM operations, will inform solutions for implementing appropriate SWM practices specifically in the Welsh small hotel sector and help in resolving SWM problem in the UK. I hope also that this study through its rich data will provide a valuable source

for those who will carry on undertaking further research in the field of SWM in the hotel sector.

This research has really added to my knowledge and contributes effectively in developing my research's ability and skills. It gives me the opportunity to explore an area of research and issues which I am sure that so many researchers are not interested in. During the research journey, I have acquired and explored issues which I find interesting, especially those that came up while developing the model, conducting the interviews with the different associated stakeholders and the search for appropriate methodology and theoretical perspective. At the beginning of my research, I adopted very much bottom-up approach to the study, selecting qualitative research methods that fit the scope of the study but while the research was going I had enriched my experience and understanding of the research process. I have now been able to adopt a more holistic approach to the research design recognizing epistemological and methodological issues. I am eager to share the experience which I have gained through the development of this thesis and also my knowledge with the research process itself and the system of conducting and supervising research students in UWIC with my colleagues and students when I return back to my position as a staff member in the Faculty of Tourism and Hotels in Suez Canal University in Egypt.