Intended for
Camden Council

Project no.
61031879

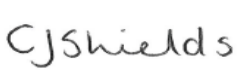
Date
20 October 2014

KILN PLACE, CAMDEN

PHASE II WASTE ASSESSMENT: WASTE STRATEGY

Revision History

Revision	Date	Purpose / Status	Document Ref.	Comments
D01	19/08/14	Draft for Comment	61031879_WA2_D01	
D02	19/09/2014	Second Draft for Comment	61031879_WA2_D02	
F01	20/10/2014	Final Issue	61031879_WA2_F01	

Prepared By	Reviewed By	Approved By
		
Ceara Shields	Georgina Dowling	Georgina Dowling
Graduate Environmental Consultant	Associate	Associate

Ramboll
60 Newman Street
London W1T 3DA
United Kingdom

tel +44 (0)20 7631 5291
fax +44 (0)20 7323 4645
london@ramboll.co.uk

CONTENTS

TABLES

FIGURES

APPENDICES

1. INTRODUCTION

1.1.1. Ramboll has been commissioned on behalf of Camden Council (CC) to undertake a Phase II Waste Assessment for the proposed development at Kiln Place, Camden.

1.1.2. Kiln Place is an existing housing estate constructed in the 1960's. Strategic proposals have been drafted to consider necessary and desired improvements to the estate for new housing and improved landscaping. These proposals will also result in the loss of some of the existing waste storage areas, as such, a Phase I Waste Assessment was undertaken to assess the existing refuse and recycling use to:

- Identify the locations and capacities of these existing waste facilities; and
- Evaluate the adequacy of the existing waste facilities.

1.1.3. The findings from the Phase I Waste Assessment have been taken forward to aid the outline of an interim and permanent refuse strategy for Kiln Place (the site) in terms of re-provision of sufficient waste capacity to continue to meet the needs of the existing residents and those new residents brought forward as a result of the proposed development.

1.2. Phase II Report Objectives and Data Sources

1.2.1. This Phase II Waste Strategy is based on the existing waste capacity and usage information presented in the Phase I report and considers what is required in waste storage terms for the proposed development in order for a planning application to be supported.

1.2.2. In addition to identifying locations for replacement waste storage areas, and the additional storage area needed to accommodate the increased number of residents on site, the Phase II report also addresses two phases of operation:

- An initial interim period up to 2017, where by storage and collection remain above-ground as per the existing CC operation; and
- A permanent revised refuse solution from 2017 onwards that accounts for a more innovative method of storage collection based on underground storage.

1.2.3. However, the interim strategy must be capable of remaining over a long-term duration as the main method of waste storage and collection if the underground storage option is not pursued as the permanent strategy from 2017 onwards.

1.2.4. This Phase II report seeks to provide a comprehensive assessment evaluating the proposed interim above-ground refuse strategy up to 2017, and, the subsequent proposed 2017 underground refuse strategy in line with CC requirements. Findings from the Phase I report have been used as necessary to help inform both the above-ground and underground refuse strategies. The report identifies the locations and sizes of the proposed above-ground waste facilities on site and evaluates their adequacy. Proposed locations for the underground waste systems are suggested within the report in line with discussions with the Architect. In addition, auto-tracking for the development is provided within the report in order to ensure access can be provided.

This information will further assist CC in their planning and execution of any site development proposals, with the recommendations of this report taken forward in the further detailed and technical design solutions.

1.2.5. Data sources used within the report have been stated under each section.

1.3. Site Description

1.3.1. The site is located in Gospel Oak in the London Borough of Camden (LBC), at the edge of Kentish Town, and adjacent to Tufnell Park, near Grafton Road. A site location and environmental constraints plan can be found in Figure 1.1.

1.3.2. The Kiln Place Estate is bounded by Lamble Street to the north, Carlton Road Junction railway line to the south, Meru Close to the east, and Grafton Road to the west. Both Meru Close and Grafton Road lead on from Oak Village, which joins the B518 Mansfield Road/Gordon House Road to the north, the B518 running from north-west to north-east to the north of the site. In addition, Grafton Road also leads onto the Prince of Wales Road, which joins the A400 Kentish Town Road to the south-east of the site. To the east is another residential estate at Meru Close, and fronting Grafton Road to the west residential houses front Grafton Road. To the north are more residential units, the Gospel Oak Primary School and Parliament Hill Fields. To the west is Lismore Circus which contains an outdoor gym and nursery.

1.4. Initial Proposals

1.4.1. Kiln Place is an existing social housing estate constructed in the late 1960's. The strategic proposals have been drafted to consider necessary and desired improvements to the estate for new housing, and improved landscaping. New housing is proposed at six plots within the existing estate, as shown in Figures 3.2, 3.3, 4.1 and 4.2, comprising of:

- **Site 1**: A row of six 3 bedroom houses with courtyards and lawned areas, following the curve of the street. Building heights alternate between one and four storeys high.
- **Site 2**: A row of two 2 bedroom houses with courtyards, following the curve of the street. Building heights alternate between one and two storeys.
- **Site 3**: Two 1 bedroom maisonettes proposed to complete the corner of existing buildings 65-80 and 81-96 Kiln Place. The building heights vary between one to four storeys, completing the new terrace elevation formed by the cottages of Plot 2.
- **Site 4**: One 3 bedroom house with a courtyard proposed to complete the corner of existing buildings 1-64 Kiln Place. The building height varies between one and three storeys.
- **Site 5**: One 2 bedroom upper maisonette, one 1 bedroom house and one 1 bedroom ground floor flat with a courtyard proposed to complete the corner of existing buildings 97-104 and 105-116 Kiln Place. Building heights vary between one and three storeys high.
- **Site 6**: One bedroom ground floor flat with a private courtyard to the front and back. Roof terrace is accessed through existing flats and provides two gardens for two existing flats of block 117-164.

1.4.2. As a result of the development proposals, several waste storage areas will be demolished. The existing waste locations are set out in Table 1.1 and show those locations that are to be retained and those that are to be demolished and therefore, require re-provision.

Table 1.1: Existing Waste Facility Locations & Demolition/Retention

Waste Facility Location	Description	Type of Waste	Demolish /Retain
1	Existing waste location to remain which is located outdoors to the north-west of the site, next to the building named the 'Shack'.	General	Retain
2	Existing waste location to remain which is located outdoors to the north-east of the site on Lamble Street.	Recycling	Retain
3	Existing waste location to be demolished and rebuilt; an internal refuse store to the north-east of the site at 117-164 Kiln Place.	General	Demolish
4	Existing waste location to be demolished and rebuilt; an internal refuse store to the east of the site on the corner of 81-96 and 65-80 Kiln Place.	Mixed	Demolish
5	Existing waste location to be demolished and relocated; located outdoors to the south-east of the site to the corner of 1-64 Kiln Place.	General	Demolish
6	Existing waste location to remain which is located outdoors to the south of the site opposite the playground.	Recycling	Retain
7	Existing waste location to be demolished; located to the south-west of the site adjacent to Unit 5.3.	General	Demolish
8	Existing waste location to be demolished; located to the south-west of the site adjacent to Unit 5.3.	General	Demolish
9	Existing waste location to remain which is located to the north-west of the site on the corner of 117-164 Kiln Place.	General	Retain

2. METHODOLOGY

2.1.1. This section sets out the approach to undertaking the desk-based evaluation of the above-ground and underground refuse strategies including noting any constraints that should be recognised when considering the study's findings.

2.2. Consultation Process

2.2.1. The following process was undertaken to inform the development and analysis of the two waste storage solutions:

- Initial Review: The possible waste facility locations were reviewed and analysed based on email correspondence with the Architect on Monday 27th January 2014 (refer to Appendix A), an additional meeting with the Architect took place on Tuesday 4th March 2014, to further inform and refine the proposed locations.
- Architect Review and CC Consultation: During the meeting with the Architect, the possible waste facility locations were confirmed and areas of concern were highlighted. To input into Stage D design decisions and the design submission for planning, the Architect and CC were consulted through both verbal and written communication (refer to Appendix A and B respectively). This communication ensured that the design was developing in line with the waste strategy including: ensuring that sufficient waste capacity is provided, and, walking distances to the waste sites are adequate for the residents of the proposed development for both the above-ground and underground waste facilities.
- Update to Proposals: Following the Architect Review and CC Consultation, the waste facility locations were evaluated and necessary amendments were made.
- Further Architect Review: Following further email correspondence with the Architect on Tuesday 12th August 2014 and Tuesday 26th August 2014, the waste facility locations were again evaluated with the necessary amendments made.

2.3. Analysis of Required Waste Capacity

2.3.1. Forecast waste capacity for both the Above-ground and Underground storage was based on the Phase I Waste Assessment of the utilisation and capacity of the existing waste areas. Any waste storage areas that were to remain, were considered in the first instance with regard to:

- Whether there was existing surplus capacity that could accommodate the displaced storage;
- The distance to the storage area from the residents that would require to use the storage area; and
- Whether the storage area currently offered, or could offer, the full breadth of waste storage types (general, recycling and food waste).

2.3.2. So that these comparisons could be made, the footprint of each type of bin required to accommodate the different waste types was taken from the Taylor Bins website[1] and the

[1] Taylor Bins. 2014. *Our Product Ranges*. [Online]. [Accessed 05/03/2014]. Available from: http://www.taylorbins.co.uk/products

Eco-Island website[2] for the Above-ground and Underground waste strategies, respectively. Using these calculations it was then necessary to calculate the maximum areas needed for each waste facility location.

2.3.3. As the waste storage areas would not be limited to the footprint of the bins only, additional space for entry into the internal refuse stores and for access around the external refuse areas was accounted for. This was based on the bin area allowance measurements within the Metric Handbook: Planning and Design Data[3], with a 30% uplift applied as a conservative assessment (see Appendix C).

2.3.4. Of particular importance was to ensure a suitable mix of, and maintained accessibility to, the three different kinds of waste collected: general, recycling and food. This was considered to be a high priority in assigning the waste locations to ensure that residents were given every opportunity to participate in the Council's waste recycling scheme, particularly given the Council's recycling target of 50% by 2020. To facilitate this Geographic Information System (GIS) software was used to allocate buffers of 20m and 30m around each waste facility location. These distances were informed by the Building Research Establishment's Environmental Assessment Method (BREEAM) and BS 5906:2005 respectively and are considered to be the preferred and maximum distance residents will be prepared to walk to dispose of their waste.

2.3.5. Initially, areas were identified based on the identified required relocated capacity including the 30% allowance for access. Then a further uplift was added to accommodate the population increase.

2.4. Calculated Population Increase

2.4.1. The Phase I report assumed a maximum occupancy of the estate with no overcrowding, thus the current waste generation could be attributed to 421 residents. Table 2.1 sets out the occupancy of the proposed development sites. This shows an increase of 56 residents, therefore the new population would be 477 persons.

Table 2.1: Proposed Sites Stage D Schedule of Accommodation

Unit No.	Bedspaces/Persons	Area (sqm)	Tenure	Total Occupancy
Unit 1.1	3 bed 5p	110	Market Sale	5
Unit 1.2	3 bed 5p	110	Market Sale	5
Unit 1.3	3 bed 5p	110	Market Sale	5
Unit 1.4	3 bed 5p	110	Market Sale	5
Unit 1.5	3 bed 5p	110	Market Sale	5
Unit 1.6	3 bed 5p	100	Market Sale	5
Unit 2.1	2 bed 3p	88	Market Sale	3
Unit 2.2	2 bed 4p	101	Market Sale	4
Unit 3.1	1 bed 2p	64	Market Sale	2

[2] Eco-Island. 2014. *Our Systems*. [Online]. [Accessed 26/03/2014]. Available from: http://www.ecoisland.co.uk/Our%20Systems.htm
[3] Adler, D. 1999. *Metric Handbook: Planning and Design Data*. Second Edition. Oxford: Architectural Press.

Unit No.	Bedspaces/Persons	Area (sqm)	Tenure	Total Occupancy
Unit 3.2	1 bed 2p	50	Affordable Rent	2
Unit 4	3 bed 5p	97	Affordable Rent	5
Unit 5.1	1 bed 2p	50	Affordable Rent	2
Unit 5.2	2 bed 4p	85	Affordable Rent	4
Unit 5.3	1 bed 2p	52	Affordable Rent	2
Unit 6	1 bed 2p	60	Affordable Rent	2
			Total	**56**

2.4.2. Whilst the proposed population uplift is 56 persons, it should be noted that the proposed strategy is that only units 3.1, 3.2, 5.1, 5.2, and 5.3 (12 persons in total) will require use of the communal waste storage facilities with all other new units storing their refuse and recycling in their private front gardens or courtyards. Therefore, the population uplift that has been used to calculate the additional waste facilities required to cater for the proposed development is limited to these units and is 433 persons.

2.5. Underground Waste Strategy

SULO ICEBERG Underground Container System

2.5.1. CC initially identified a SULO system and provided information regarding the specification requirements of this product. A site visit to Tower Hamlets to understand the SULO underground waste collection system process was organised by CC and took place on Tuesday 19th November 2013.

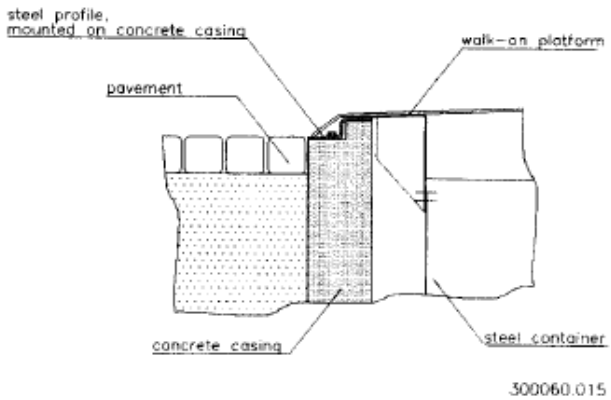
2.5.2. The system offers a wide range of benefits, such as:

- The containers are available in 3, 4 and 5 cubic metre sizes;
- The collection containers are suitable for recyclable materials such as glass, paper, cardboard, plastics, tin cans, textiles, etc. as well as for residual and biological wastes;
- The practical design ensures a high filling level of over 85%;
- The lifting mechanism on the on the collection containers is designed to be compatible with the widest range of collection vehicle hoists;
- The aperture columns can be fitted with locking devices to prevent the unauthorised input or removal of waste or recyclables, which can either be mechanical or electronic with combined ID system; and
- Level indicators combined with GPS or automatic telephone link are available for economic collection scheduling.

2.5.3. The main elements of the system include (refer to Figure 2.1):

- Watertight cast reinforced concrete shaft with spring loaded safety platform;
- Collection container for glass made of noise-reducing Bondal metal with sound insulation for bottom trapdoors and filling point;
- Collection containers for materials other than glass made of galvanised steel sheeting;
- Walk-on platform made of galvanised and contoured non-slip metal; and
- Aperture columns made of galvanised, powder-coated steel sheeting.

Figure 2.1: Diagram of ICEBERG underground system



2.5.4. In the Architect Review meeting the SULO underground waste storage system process was explained from observations made at the visit. The following key requirements were raised in regard to identifying suitable potential locations for the underground receptacles:

- Areas must remain within convenient locations for residents; e.g. no further than a 30m walk from their dwellings;
- Areas mist be accessible by collection vehicles;
- Underground area must be suitable with regard to LandScope Underground Infrastructure Mapping; and
- Area must be appropriate with regard to amenity and aesthetic value of the estate.

Eco-Island: Underground Recycling & Refuse Storage Systems

2.5.5. During the course of the underground waste strategy analysis, the Council's choice of system was revised to Eco-Island.

2.5.6. A telephone conversation took place with Julia Farr on Monday 26th March 2014 in which she confirmed that instead of implementing the SULO system, they would be looking to instead install the Eco-Island Underground Recycling and Refuse System. It was advised that Ann Baker, the Principal Environmental Services Officer from CC, should be contacted regarding this system. The main points of the consultation were:

- As long as the standard eurobin sizes (any size from 500 litres upwards) are used CC will be able to service them;
- The same vehicles that currently collect the refuse and recycling will be able to collect the waste; and
- The eco-island systems have only been seen used for underground storage.

2.5.7. Attempts were made to contact Eco-Island directly; however they could not be reached by phone or email. Refer to Appendix D for email correspondence.

2.5.8. Eco-Island provide underground recycling and refuse systems that are hydraulic telescopic lifting mechanisms, for the storage of standard UK design refuse and recycling containers in a secure and discrete underground concrete enclosure. These are then collected in the normal manner by traditional UK operative collection and vehicle lifting methods.

2.5.9. The system offers the following proven benefits to the end users, facilities providers and facilities managers, and to the environment in general:

- Use of standard UK design wheelie bin containers, this avoids the significant extra cost of purchasing and servicing an alternative vehicle collection fleet;
- Improved access at waste/recycling facilities for disabled, young and elderly people;
- Promotion of waste and recycling separation at the first stage;
- More secure containers from general mis-use and /or vandalism;
- Extended container life, and therefore reduction in servicing and replacement costs;
- Elimination of contact with waste materials, by humans, animals and pests;
- Full compatibility with existing waste operatives collection methods;
- Improved collection operative efficiency with centralised refuse and recycling facilities;
- Reduced general waste decomposition due to cooler underground storage;
- Reduced unpleasant smells due to waste being stored underground;
- Reduced noise during waste/recycling material deposit due to enclosed underground location; and
- Improved hygiene, tidiness and cleanliness within the surrounding environment.

2.5.10. Consequently, the Eco-Island system was assessed with regards to the underground waste strategy, instead of the SULO system.

2.6. Constraints

2.6.1. It must be recognised that waste is temporally variable and the findings of this report are based on observations made, and data available, at the time of the survey detailed in the Phase I report.

2.6.2. In addition, the locations of the waste facilities for the Above-ground and Underground strategy were based on available existing space in the development, which is already limited.

2.6.3. If the development is significantly delayed, postponed or altered, it may be necessary to re-visit the site to determine if there have been any changes to the amount of waste produced by the residents, as a result of any changes in CC's housing allocations (for example, more family households are allocated to the site as opposed to single occupants).

3. ABOVE-GROUND WASTE STRATEGY

3.1. Initial Review & Location/Capacity Proposals

3.1.1. The existing waste facility locations were determined based on the information provided from the Architect and existing knowledge of the site from the Phase I waste survey (refer to Figure 3.1):

Table 3.1: Above-ground Waste Facility Locations

Above-ground Waste Facility Location	Description	Area assigned by Architect (sqm)	Type of Waste
1	Existing waste location (1) to remain which is located outdoors to the north-west of the site, next to the building named the 'Shack'.	N/A	General
2	Existing waste location (2) to remain which is located outdoors to the north-east of the site on Lamble Street.	N/A	Recycling
3	Existing waste location (3) to be demolished and rebuilt; an internal refuse store to the north-east of the site at 117-164 Kiln Place.	8	General
4	Existing waste location (4) to be demolished and rebuilt; an internal refuse store to the east of the site on the corner of 81-96 and 65-80 Kiln Place.	13	Mixed
5	Existing waste location (5) to be demolished and relocated; located outdoors to the south-east of the site to the corner of 1-64 Kiln Place.	8	General
6	Existing waste location (6) to remain which is located outdoors to the south of the site opposite the playground.	N/A	Recycling
7	Existing waste locations (7 and 8) to be demolished, merged and relocated; located to the south-west of the site adjacent to Unit 5.3.	8	General
8	Existing waste location (9) to remain which is located to the north-west of the site on the corner of 117-164 Kiln Place.	N/A	General
N.B. New builds: The current proposed strategy is for all the new dwellings, aside from units 3.1, 3.2, 5.1, 5.2, 5.3, to individually store their refuse and recycling in their private front gardens or courtyards. Units 3.1 and 3.2 will use the communal refuse storage area for 65-96 Kiln Place. Units 5.1, 5.2 and 5.3 will use the communal refuse storage area for 97-116 Kiln Place.			

3.1.2. Figures 3.2 and 3.3 respectively provide maps of the above-ground waste locations with the 20m and 30m buffers applied to account for the distance residents will be prepared to walk. These locations have been analysed with regard to waste capacity for the current residents up to 2017 and beyond as required.

3.1.3. Table 3.2 sets out the identified total area needed for waste storage, accounting for the percentage area uplift required to allow for the 30% accessibility buffer and comparing to the areas assigned by the Architect.

3.1.4. This identified that:

- Locations 3, 4 and 5 have surplus area of 4.8sqm, 3.87sqm and 3.2sqm respectively;
- Locations 1, 2, 6 and 8 match capacity; and
- Location 7 is at a deficit of -4.74sqm.

Table 3.2: Total Area Needed for each Above-ground Waste Facility Location

Above-ground Waste Facility Location	Bin Type	Area Needed (sqm)	% Uplift	Total Area Needed (incl. 30% uplift)	Area assigned by Architect (sqm)	Difference (incl. 30% uplift)
1	Wheelie Bin	0.4292	0.55796	0.55796	N/A	N/A
2	Continental 1280 Recycling	2.4822	3.22686	4.4343	N/A	N/A
	Continental 500 Recycling	0.9288	1.20744			
3	Continental Trade 1100	2.45	3.185	3.185	8	4.815
4	Continental Trade 1100	2.45	3.185	9.23273	13	3.76727
	Continental 1280 Recycling	3.7233	4.84029			
	Continental 500 Recycling	0.9288	1.20744			
5	Continental Trade 1100	3.675	4.7775	4.7775	8	3.2225
6	Continental 1280 Recycling	3.7233	4.84029	6.04773	N/A	N/A
	Continental 500 Recycling	0.9288	1.20744			
7	Continental Trade 1100	9.8	12.74	12.74	8	-4.74
8	Continental Trade 1100	3.675	4.7775	4.7775	N/A	N/A

3.1.5. Location 7, as discussed in Table 3.1, is an external structure that currently has been deemed to have insufficient space for the required waste capacity for the existing residents. To address the demand for capacity the area would require 12.74sqm. Therefore, it is recommended that this area is increased to 13sqm.

3.1.6. It should be noted that all other areas are regarded as having sufficient space to support the capacity of the waste facilities for the existing population. The locations that were termed as not applicable, are the areas that will be unaffected by the proposed development. It was determined that these locations already have the correct capacity or have existing over-capacity.

3.1.7. Further to discussions with the Architect, it was enquired whether location 7 could be increased to 13sqm. However, as location 6 will remain, it was instead explored as to whether or not the facilities there could be increased to accommodate the surplus storage.

3.1.8. Consequently, locations 6 and 7 have been considered with the objective of incorporating a portion of the waste capacity that location 7 is currently lacking into location 6. This has also presented an opportunity to re-allocate of the mix of general waste and recycling bins at each location to help encourage recycling, as currently location 6 is only recycling and location 7 is only general waste.

3.1.9. Consequently, several variations of the rearrangement of the bins were considered, with the selected arrangement that location 7 remains as 8sqm, with location 6 accommodating the necessary capacity increase into an area of 10.8sqm (refer to Table 3.3).

Table 3.3: Rearrangement of Bins at Above-ground Locations 6 and 7

Above-ground Waste Facility Site	Bin Type	Bin Footprint (sqm)	Number of bins needed	Total Area Needed (incl. 30% uplift)	Area assigned by Architect (sqm)	Difference (incl. 30% uplift)
6	Continental Trade 1100	1.225	4	10.8043	N/A	N/A
	Continental 1280 Recycling	1.2411	2			
	Continental 500 Recycling	0.9288	1			
7	Continental Trade 1100	1.225	4	7.98343	8	0.01657
	Continental 1280 Recycling	1.2411	1			

3.1.10. Although location 6 was initially to be left unaffected, altering the distribution with location 7 is considered to be beneficial for the site in terms of visual aspects, meeting waste facility needs and encouraging the uptake of recycling.

3.1.11. After a review of the number of bins required for each location against the space available, bins have been added to certain locations to utilise the areas effectively by encouraging recycling and ensuring the risk of waste overflowing is a very low probability.

3.1.12. In addition to these alterations, and after further Architect review regarding the size and number of bins required in each location, locations 4, 5 and 7 have been identified as requiring amendments. The Architect has identified that the external enclosures of location 5 and location 7 need to be enlarged in order to allow for greater access to the

bins in each location. Therefore, they have both been increased to 14.5m^2 which is deemed to be adequate for the bins required (refer to Table 3.4).

Table 3.4: Area Increase at Above-ground Locations 5 and 7

Above-ground Waste Facility Site	Bin Type	Bin Footprint (sqm)	Number of bins needed	Total Area Needed (incl. 30% uplift)	Area assigned by Architect (sqm)	Difference (incl. 30% uplift)
5	Continental Trade 1100	1.225	3	7.59837	14.5	6.90163
	Continental 1280 Recycling	1.2411	1			
	Continental 500 Recycling	0.9288	1			
7	Continental Trade 1100	1.225	4	7.98343	14.5	6.51657
	Continental 1280 Recycling	1.2411	1			

3.1.13. Regarding alterations to location 4, after various discussions with the Architect, it has been decided to rearrange the bins with location 3. This location seems the most appropriate due to its close proximity to location 4. Therefore the bins will be rearranged between the two locations as shown in Table 3.5.

Table 3.5: Rearrangement of Bins at Above-ground Locations 3 and 4

Above-ground Waste Facility Site	Bin Type	Bin Footprint (sqm)	Number of bins needed	Total Area Needed (incl. 30% uplift)	Area assigned by Architect (sqm)	Difference (incl. 30% uplift)
3	Continental Trade 1100	1.225	3	6.39093	8	1.60907
	Continental 1280 Recycling	1.2411	1			
4	Continental Trade 1100	1.225	3	9.21180	13	3.7882
	Continental 1280 Recycling	1.2411	2			
	Continental 500 Recycling	0.9288	1			

3.1.14. The current proposed above-ground strategy is for all the new dwellings to individually store their refuse and recycling in their private front gardens or courtyards, with the exception of units 3.1, 3.2, 5.1, 5.2 and 5.3, (refer to Table 3.6).

Table 3.6: New Dwelling Units Waste Storage

New Dwelling Units	Population Increase	Assigned Waste Storage Area
1.1 – 1.6	30	Private front gardens
2.1 – 2.2	7	Private front gardens
3.1 – 3.2	4	Communal refuse storage area for 65-96 Kiln Place
4	5	Private front gardens
5.1 – 5.3	8	Communal refuse storage area for 97-116 Kiln Place
6	2	Private front courtyard

3.1.15. Based on the population increase in relation to the nearest waste facility locations, the Architect confirmed that only units 3.1, 3.2, 5.1, 5.2 and 5.3 would be using the communal refuse storage which was calculated as 12 residents; a 2.85% increase in resident use of the facilities. The Architect assigned location 4 for units 3.1 and 3.2, and location 7 for units 5.1, 5.2 and 5.3. As location 4 is both general and recycling waste this would cover these residents, and if recommendations are taken on board location 7 will also be general and recycling waste.

3.1.16. It was worked out that assuming maximum occupancy location 4 would have 4 new residents using its facilities, and location 7 would have 8. Therefore, the 2.85% increase in resident use of the facilities was split accordingly. Each of these locations would need an increase in area in order to facilitate the bins needed (refer to Table 3.7).

Table 3.7: Recalculated Areas needed for Above-ground Locations 4 and 7 based on Resident Increase

Above-ground Waste Facility Site	Bin Type	Total Volume of Bins Utilised (l)	Volume Utilised with population increase (l)	Total Area Needed (incl. 30% uplift)	Area assigned by Architect (sqm)	Difference (incl. 30% uplift)
4	Continental Trade 1100	2200	2220.9026	12.03267	13	0.96733
	Continental 1280 Recycling	2880	2907.3634			
	Continental 500 Recycling	375	378.56295			
7	Continental Trade 1100	4400	4483.6105	9.57593	8	-1.57593
	Continental 1280 Recycling	1173	1195.2898			

3.1.17. With regard to above-ground location 4, even though the total area needed for the amount of bins has increased, this area is still within the 13sqm the Architect has allocated. However above-ground location 7 has been deemed insufficient. To avoid exceeding the assigned 8sqm for location 7, one extra general waste bin should be added to location 6. Therefore, above-ground waste facility location 6 measurements will alter (refer to Table 3.8).

Table 3.8: Recalculated Areas needed for Above-ground Location 6 based on Resident Increase

Above-ground Waste Facility Site	Bin Type	Bin Footprint (sqm)	Number of bins needed	Total Area Needed (incl. 30% uplift)	Area assigned by Architect (sqm)	Difference (incl. 30% uplift)
6	Continental Trade 1100	1.225	5	12.3698	N/A	N/A
	Continental 1280 Recycling	1.2411	2			
	Continental 500 Recycling	0.9288	1			

4. UNDERGROUND WASTE STRATEGY

4.1.1. Whilst observing the SULO refuse collection, it was noted that specific vehicles are required to collect the waste which include a crane lift. The collection container is then lifted out of the ground with the spring loaded safety platform rising automatically to the top edge of the shaft which seals the shaft, ensuring complete safety. The container is then positioned above the vehicle and the bottom trapdoors open at an angle of 90° which are shaped in such a way as to contain residual liquid until emptying. Refer to Appendix E for images taken of the process.

4.1.2. It was also noted that as the collection container is retrieved out of the ground there is a swinging movement albeit limited in its extent. As a result of this it was noted that it is important for these facilities to be placed in areas which have a buffer around them that is not used for car parking, etc. It was observed that one of the containers was positioned adjacent to a parked car which could be considered a risk due to the container movements. In addition, the waste operators informed that there is not much waste left outside the containers on the ground. Any that is left, is cleared away by a community warden which results in a clean tidy area.

4.1.3. Based on the criteria listed in 2.2.6, the following possible locations for the underground system were discussed. These were identified in reference to the proposed development sites:

- The public square opposite site 1;
- The triangular area in front of site 3;
- Location of proposed external enclosure near site 4; and
- Location of proposed external enclosure near site 5.

4.1.4. These areas were reviewed following the Architect Review and the Architect provided notes for the possible SULO locations discussed which included:

- Confirmation that the public square is still a possible SULO location as there are no private windows from 117-164 looking directly onto this space at ground floor, although it will be important to retain vehicular access to the garages and existing storage areas located there.
- It is considered unlikely that the triangular area in front of site 3 would be feasible for SULO collection as it is bounded by a low level wall and railing, provides access to the front of units 3.1 and 3.2, and is at a slightly lower level than the vehicular access along Kiln Place.
- The location of proposed external enclosures near site 4 and 5 are still possible locations subject to CC's comments and the review of the underground services.

Eco-Island: Underground Recycling & Refuse Storage Systems

4.1.5. Due to the underground waste system being changed from SULO to Eco-Island, as previously mentioned, the proposed locations had to be reviewed.

4.1.6. From the above-ground waste facilities, the amount of volume needed for waste was recorded, and it was calculated how many 1280 litre bins are needed for the implementation of the eco-island system (refer to Appendix F).

4.1.7. The population increase was added to this, although it did not affect the number of bins required.

4.1.8. Based on the Architect's comments and the locations of the above-ground waste facility locations it was decided that the following four areas would be suitable underground waste facility locations (refer to Figure 4.1 and Figure 4.2):

Table 4.1: Underground Waste Facility Locations

Underground Waste Facility Location	Description
1	The public square opposite site 1 to the north-east of the estate.
2	External area near site 4 to the south-east of the estate.
3	External area near site 5 to the south-west of the estate.
4	External area near 'The Shack' to the north-west of the estate.

Underground Survey Review

4.1.9. The proposed underground waste facility locations have been reviewed against the LandScope Underground Infrastructure Mapping (Drawing Reference: 1570_200_2). The following table shows details of the review by location:

Table 4.2: Underground Survey Review of Proposed Underground Waste Facility Locations

Underground Waste Facility Location	Review Notes
1	It should be ensured that the Telecoms and Surface Water Sewer underground infrastructure in the area are avoided.
2	It should be ensured that the Cable Television underground infrastructure in the area is avoided.
3	It should be ensured that the Cable Television underground infrastructure in the area is avoided.
4	It should be ensured that the Telecoms and Cable Television underground infrastructure and any Sluice Valves in the area are avoided.

4.1.10. As long as the various underground infrastructure are avoided in these locations, they are each viable locations for the underground waste system.

5. AUTO-TRACKING EXERCISE

5.1.1. As both the above-ground and underground waste strategies will require the same refuse vehicle to collect the waste, the auto-tracking exercise was only required to be carried out once for both scenarios.

5.1.2. A swept path analysis showing the manoeuvring of Camden refuse collection around the development can be found in Figure 5.1.

5.1.3. Analysis of the roads around the new proposed waste locations presented no issues for the refuse collection vehicles access as considered in the Transport Statement (Reference: 61031879.TP.TS.1D).

6. EVALUATION

6.1.1. The Phase II waste strategy has been informed by the findings of the Phase I waste assessment. Based on the results of the survey from Phase I, the volume utilised has been taken into consideration when determining the bin location arrangements for both the above-ground and underground waste strategies. In addition, population increase has been considered to ensure the waste facilities for all residents, both existing and future, are sufficient.

6.1.2. The above-ground waste strategy has been slightly altered from the existing waste facility locations, with the relocation and rearrangement of bins across the site. The alterations realised the opportunity to reallocate the mix of general and recycling bins to help encourage recycling. The above-ground waste strategy, whilst potentially only being for an interim duration has also been considered from a permanent perspective should the underground strategy not be implemented.

6.1.3. For both the above-ground and underground waste strategy the site is already quite constrained so there was limited opportunity to develop new waste locations from the existing facilities. This was especially so for the underground waste strategy, which was constrained by the underground infrastructure across the site. Therefore, only a few locations have been deemed suitable to enable the large areas required to accommodate the identified waste capacity. Each of the four areas identified for underground waste have facilities for both general and recycling to help encourage recycling.

6.1.4. Both the above-ground and underground waste strategies have identified spaces that are both available and suitable for the proposed facilities and have sought to use these in the most efficient manner to address the existing and proposed development's waste management requirements.

7. FIGURES

Reproduced from Ordnance Survey map data by permission of the Ordnance Survey. Licence No: 100048749

Legend

- Site Boundary
- Listed Building
- Metropolitan Open Land
- Conservation Area
- Strategic Landmark Viewing Corridor

Project Title

Kiln Place, Camden

Figure Title

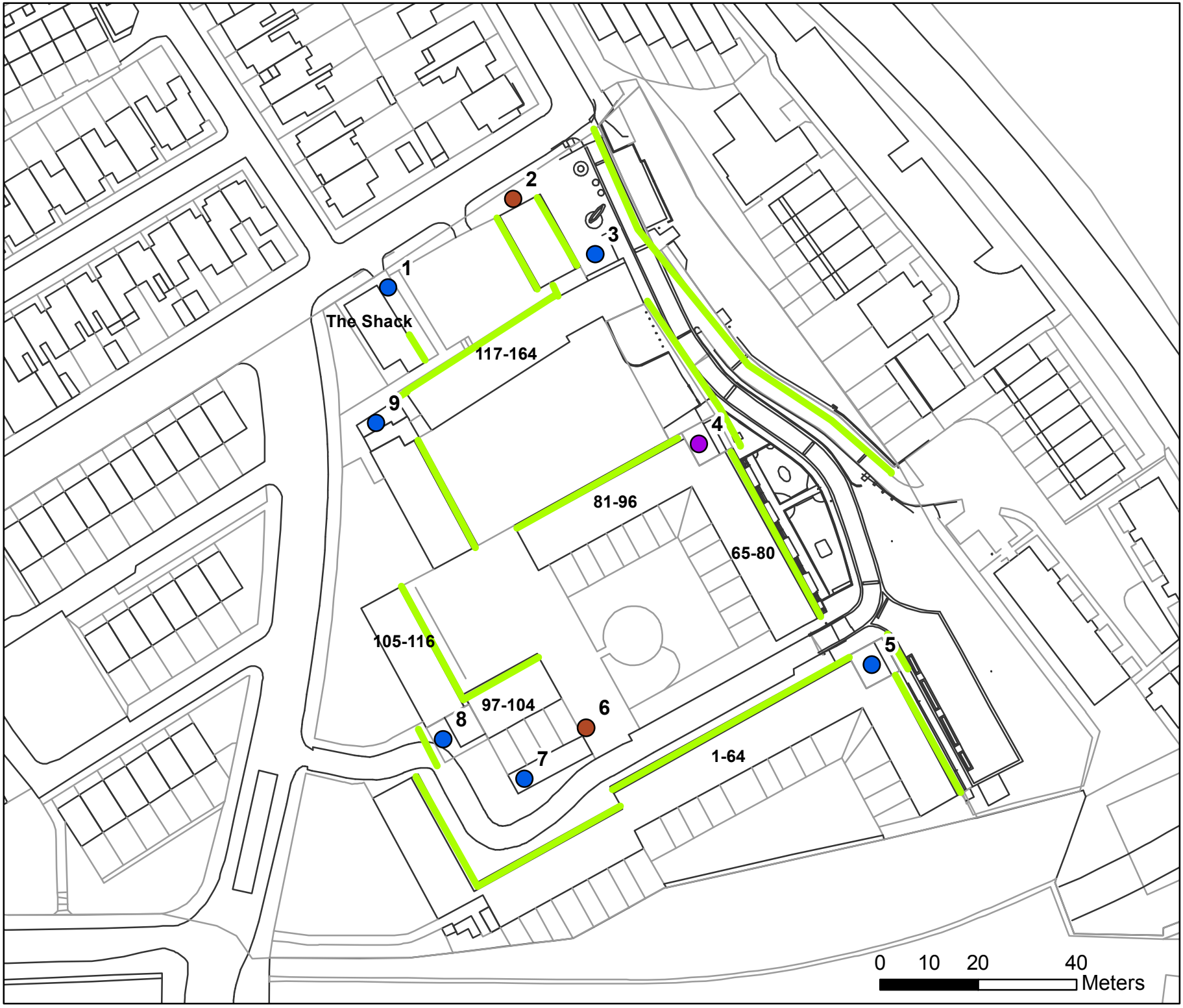
Environmental Constraints

RAMBOLL

Tel: 020 7631 5291
Fax 020 7323 4645

london@ramboll.co.uk
www.ramboll.co.uk

Date	Prepared By
16/09/2013	CS
Figure No. Figure 1.1	Revision -



Key

Indicative Building Entrances

Waste Collection Points

- General & recycling
- General waste
- Recycling

N

Client

Camden Council

Project Title

Kiln Place, Camden

Project Number

61031879

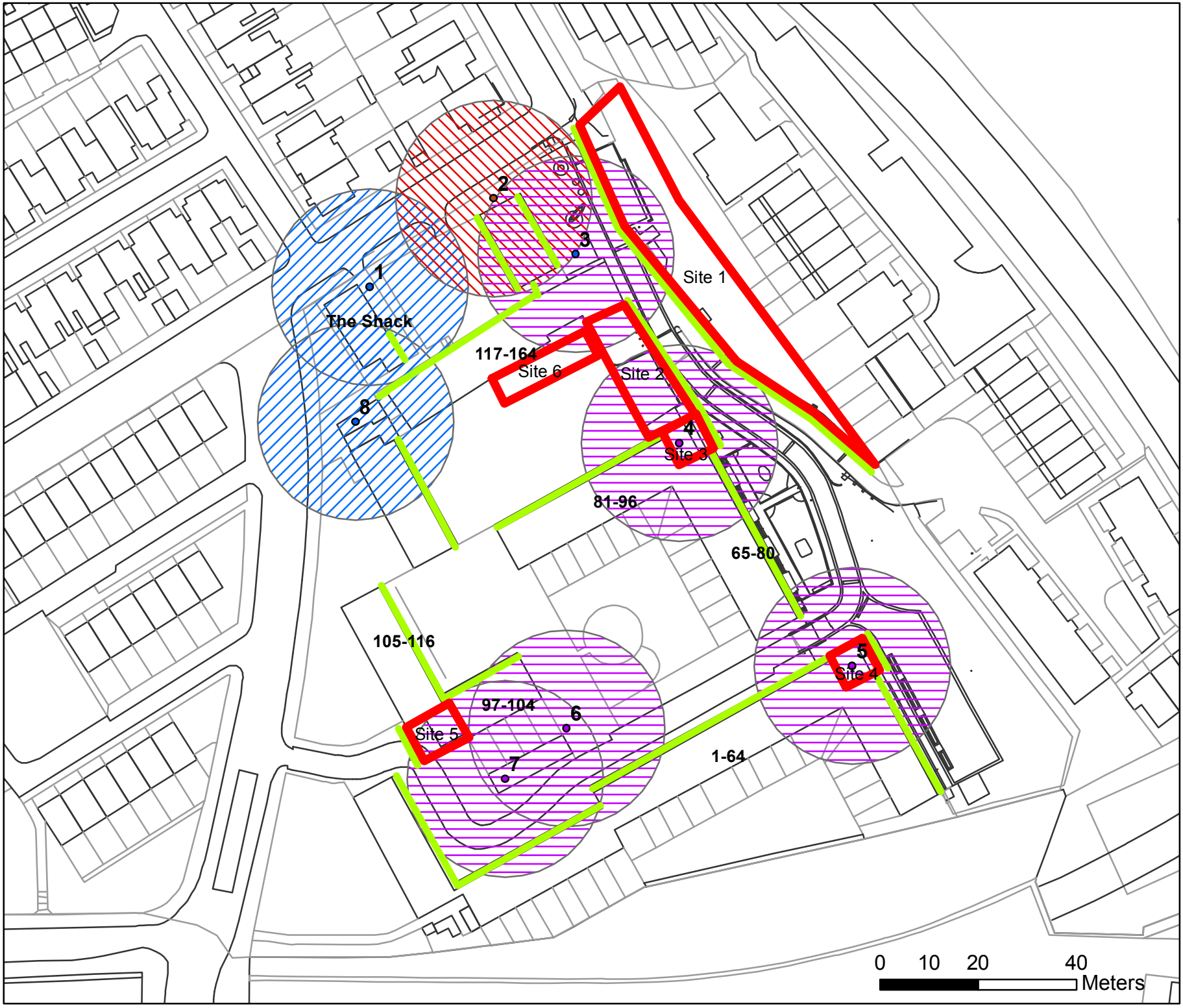
Figure Title

Existing Waste Facility Locations

RAMBOLL

Tel: 023 8081 7500 southampton@ramboll.co.uk
Fax: 023 8081 7600 www.ramboll.co.uk

Date	Prepared By
18/08/2014	AT/CS
Figure No. 3.1	Revision -



Key

- Proposed Development Sites
- Indicative Building Entrances

Waste Collection Points

- General & recycling
- General waste
- Recycling

Type

- General & recycling
- General waste
- Recycling

N

Client

Camden Council

Project Title

Kiln Place, Camden

Project Number

61031879

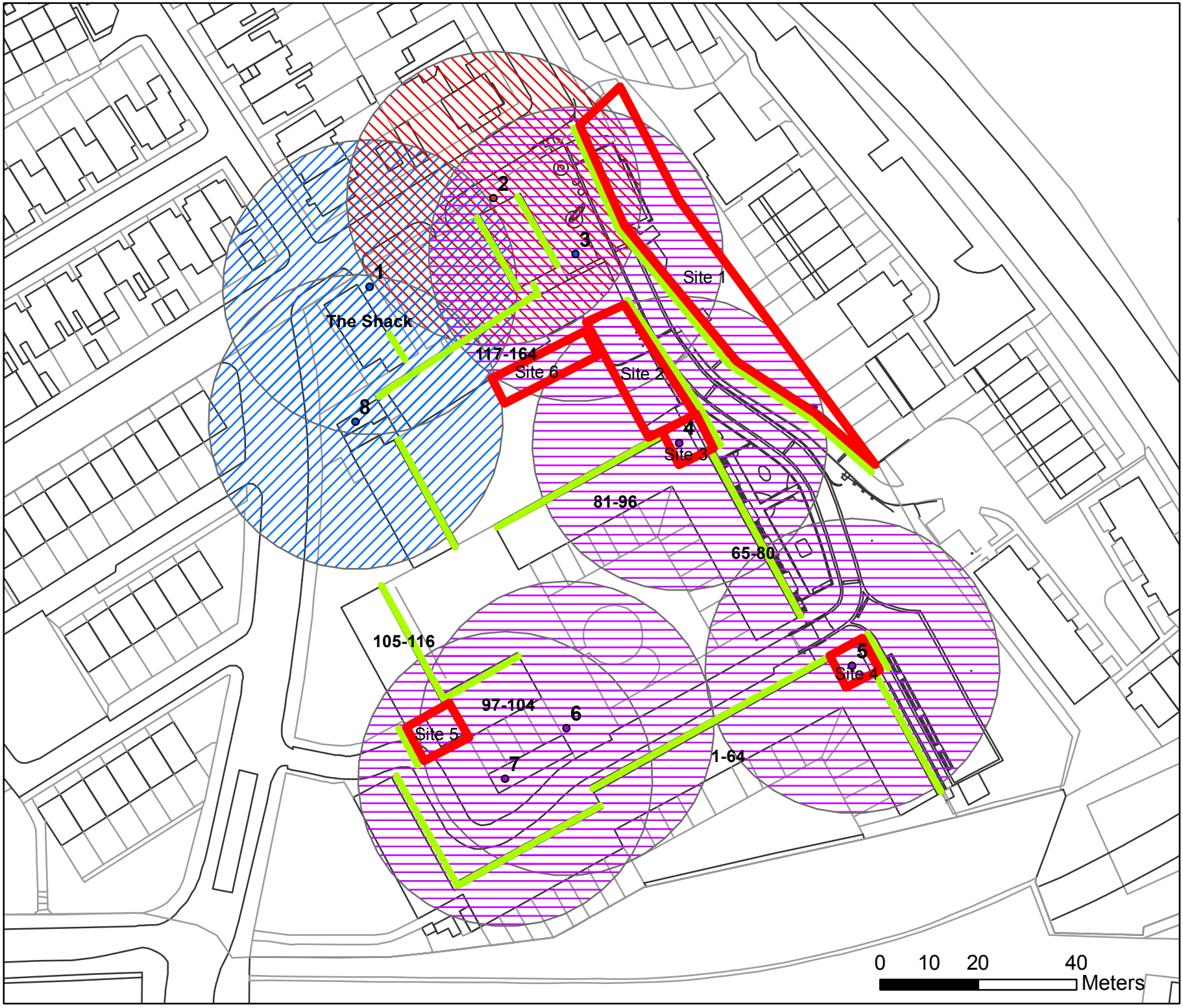
Figure Title

Above-ground Waste Facility Locations with 20m Buffer

RAMBOLL

Tel: 023 8081 7500 southampton@ramboll.co.uk
Fax: 023 8081 7600 www.ramboll.co.uk

Date	Prepared By
19/09/2014	AT/CS
Figure No.	**Revision**
3.2	-



Key

- Proposed Development Sites
- Indicative Building Entrances

Waste Collection Points

- General & recycling
- General waste
- Recycling

Type

- General & recycling
- General waste
- Recycling

N

Client

Camden Council

Project Title

Kiln Place, Camden

Project Number

61031879

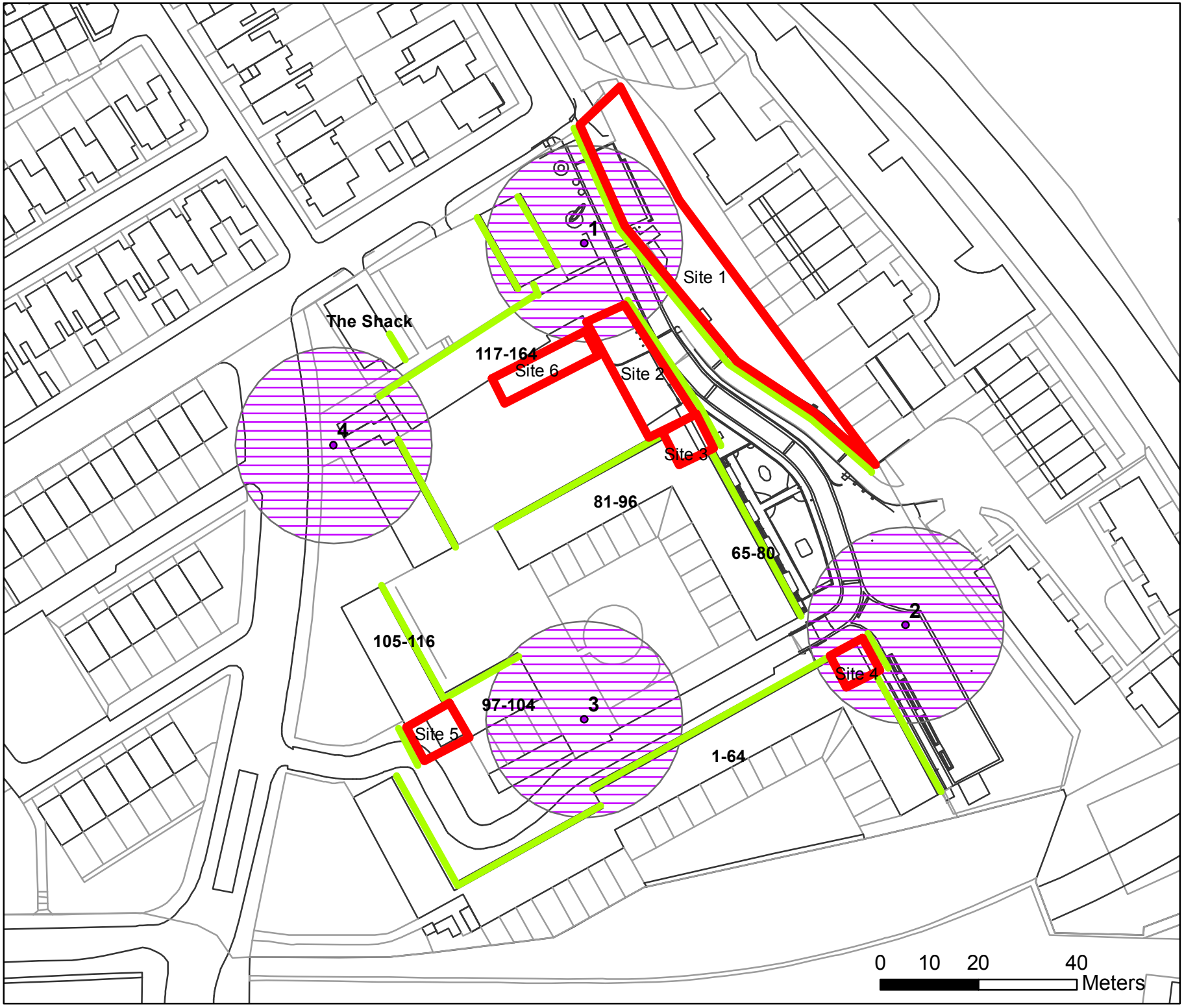
Figure Title

Above-ground Waste Facility Locations with 30m Buffer

RAMBOLL

Tel: 023 8081 7500 southampton@ramboll.co.uk
Fax: 023 8081 7600 www.ramboll.co.uk

Date	Prepared By
19/09/2014	AT/CS
Figure No.	**Revision**
3.3	-



Key

- Proposed Development Sites
- Indicative Building Entrances

Waste Collection Points

- General & recycling

20m Buffer from Collection Points

- General & recycling

N

Client

Camden Council

Project Title

Kiln Place, Camden

Project Number

61031879

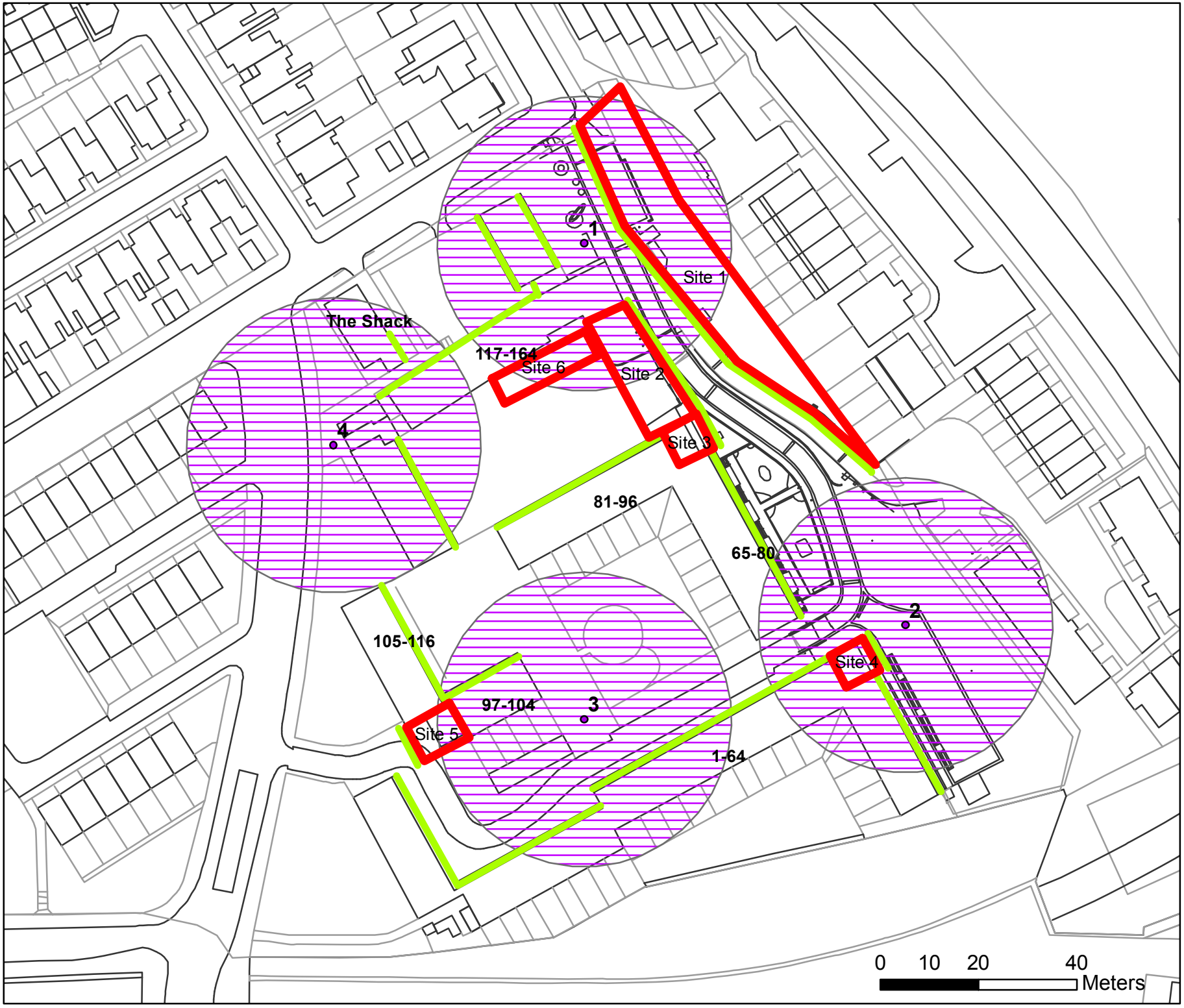
Figure Title

Underground Waste Facility Locations with 20m Buffer

RAMBOLL

Tel: 023 8081 7500 southampton@ramboll.co.uk
Fax: 023 8081 7600 www.ramboll.co.uk

Date	Prepared By
19/09/2014	CS
Figure No.	**Revision**
4.1	-



Key

- Proposed Development Sites
- Indicative Building Entrances

Waste Collection Points

- General & recycling

30m Buffer from Collection Points

- General & recycling

N

Client

Camden Council

Project Title

Kiln Place, Camden

Project Number

61031879

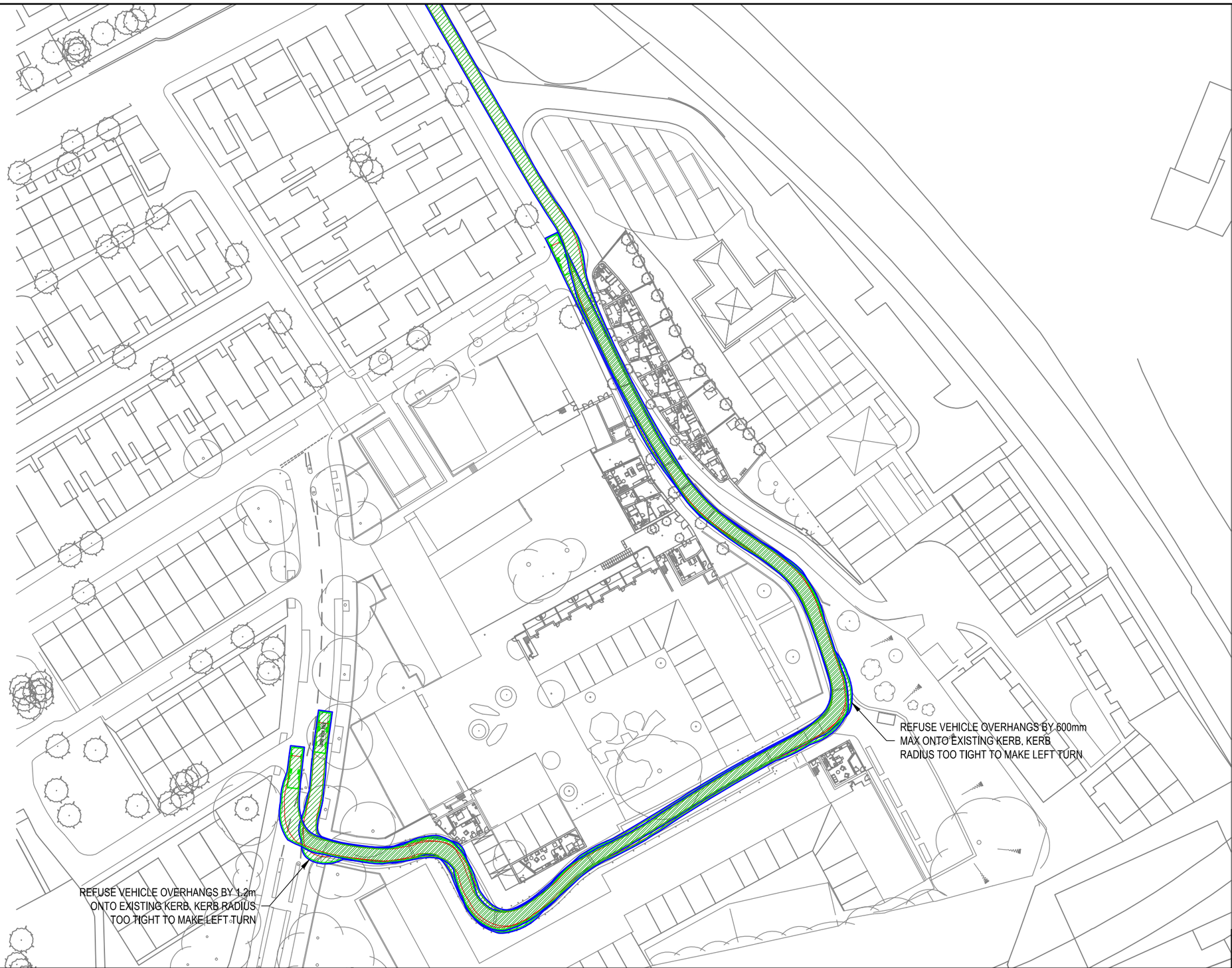
Figure Title

Underground Waste Facility Locations with 30m Buffer

RAMBOLL

Tel: 023 8081 7500 southampton@ramboll.co.uk
Fax: 023 8081 7600 www.ramboll.co.uk

Date	Prepared By
19/09/2014	CS
Figure No. 4.2	Revision -



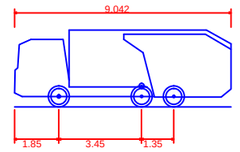
NOTES:

1. THIS DRAWING IS NOT TO BE SCALED.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL AND M&E DRAWINGS.
3. THIS IS NOT AN INSTALLATION DRAWING NOR A CO-ORDINATION DRAWING.
4. VEHICLE SWEPT PATHS WERE GENERATED USING AUTOCAD VEHICLE TRACKING 2014.
5. VEHICLE SWEPT PATHS UNDERTAKEN AT 5km/h (FORWARD) AND 2.5km/h (REVERSE).

KEY

- VEHICLE BODY SWEPT PATH
- VEHICLE BODY TRACKING
- VEHICLE WHEEL-BASE TRACKING
- 300mm BUFFER ZONE

VEHICLE PROFILE:



CAMDEN REFUSE VEHICLE	
OVERALL LENGTH	9.042m
OVERALL WIDTH	2.490m
OVERALL BODY HEIGHT	3.204m
MIN BODY GROUND CLEARANCE	0.409m
TRACK WIDTH	2.490m
LOCK TO LOCK TIME	4.00s
WALL TO WALL TURNING RADIUS	7.400m

Rev	Description	Date	By / Chk	App
I01	INFORMATION ISSUE	14.08 2014	AJM SP	TOH

INFORMATION

RAMBOLL

tel 020 7631 5291 fax 020 7323 4645 london@ramboll.co.uk
www.ramboll.co.uk

KILN PLACE DEVELOPMENT
CAMDEN

CAMDEN REFUSE VEHICLE
SWEPT PATH ANALYSIS ACCESS INTO SITE

Scale:	Date:	Drawn:	Checked:
NTS @ A3	AUG 2014	AJM	SP

Drawing No.: 61031879/CT/SK002

Rev: I01

8. APPENDICES

APPENDIX A ARCHITECT CONSULTATION RECORD

APPENDIX B CAMDEN COUNCIL CONSULTATION RECORD

APPENDIX C ABOVE-GROUND WASTE FACILITY LOCATIONS INFORMATION

APPENDIX D ECO-ISLAND CONSULTATION RECORD

APPENDIX E UNDERGROUND REFUSE COLLECTION TRIP PHOTOS

APPENDIX F UNDERGROUND WASTE FACILTY LOCATIONS INFORMATION

APPENDIX A ARCHITECT CONSULTATION RECORD

Ceara Shields

From: Fiona Sheppard <Fiona@peterbarberarchitects.com>
Sent: 27 January 2014 10:22
To: Ceara Shields
Cc: Astrid Tishler; Colin Bath; Yolanda.Edwards@echarris.com; Alice Brownfield
Subject: RE: Interim Waste Facility Locations
Attachments: Mail Manager Filed Attachments.htm; Mail Manager Removed Attachments.txt

Dear Ceara,

KILN PLACE – Waste

Apologies for not responding to your previous email – I had not received it & found it this morning hiding in my spam folder.

My comments are as follows:

Interim Refuse Storage Locations:

- If you compare the existing & proposed plans you will see that the existing refuse storage areas listed below are all proposed to be demolished as part of the works. There may be other communal refuse store locations which we are not aware of on the estate & which will therefore be remaining – this is something I am sure your site survey has already established?

  We are proposing 'Interim' refuse store locations to replace those being demolished, which need to be viable to accommodate the existing and future demand. The intention is that these would only be required for the interim years until the underground Sulo system is installed. However, for the purposes of Planning, we need your report to confirm that these are viable locations which could remain in use in perpetuity should the underground system not be installed as currently planned.

- **117-164 Kiln Place:** Interim Refuse Store location proposed within existing 'bulky white goods storage room' as indicated on 116_L_001 revD. Approx area of storage room 8sqm. Ramboll to confirm if this is sufficient?

- **65-96 Kiln Place:** Interim Refuse Store location proposed within new build footprint of Plot 3. Approx area of storage room 13 sqm. Ramboll to confirm if this is sufficient?

- **1-64 Kiln Place:** Interim Refuse Store location proposed as external enclosure to the north of Plot 4. Apologies this was missing from the Stage D design freeze set, drawing 116_L_002 revD reattached showing location. Approximate area of external enclosure 8 sqm. Ramboll to confirm if this is sufficient?

- **97-116 Kiln Place:** Interim Refuse Store location proposed as external enclosure adjacent to Unit 5.3. Approximate area of external enclosure 8 sqm. Ramboll to confirm if this is sufficient?

- **New Builds:** the current proposed strategy is for all the new dwellings aside from units 3.1, 3.2, 5.1, 5.2, 5.3 to individually store their refuse & recycling in their private front gardens. Units 3.1 and 3.2 will use the communal refuse storage area for 65-96 Kiln Place. Units 5.1, 5.2 & 5.3 will use the communal refuse storage area for 97-116 Kiln Place. The GIAs of the units are shown on the Schedule of Accommodation in the top right hand corner of the GA plan drawings, this will give you the total area.

Occupancy:

- Any such queries regarding the existing estate should be directed to the Client. I understood that your colleague Astrid had emailed Julia Farr regarding this & Julia responded on 22/01? Should any further information be required, this needs to be made clear to the Client.

Please do not hesitate to contact us with any further queries. Please note, Alice Brownfield will be taking over as Project Architect from the end of this week onwards, so please direct all future communication to Alice.

Best regards,

Fiona Sheppard

Associate Director
For and on behalf of ***Peter Barber*ARCHITECTS**

NB. Please note that I will be commencing maternity leave on Friday 31st January 2014.

UK Refurbishment Architect of the Year 2013
UK Housing Architect of the Year Finalist 2013
UK Masterplanning Architect of the Year Finalist 2012
UK Housing Architect of the Year 2010/11
UK Housing Architect of the Year 2007/08

Peter Barber Architects
173 Kings Cross Road
London WC1X 9BZ
www.peterbarberarchitects.com
t 020 7833 4499 / f 020 7833 4999

From: Ceara Shields [mailto:Ceara.Shields@ramboll.co.uk]
Sent: 24 January 2014 09:52
To: Fiona Sheppard
Subject: RE: Interim Waste Facility Locations

Hi Fiona,

Hope you're well. I'm just wondering if you've been able to have a look at my email below. It would be good to have this information to put into the Phase 2 report. As I've been doing the Phase 1 report I have come up with a few more queries. They are listed below:

- As requested in the email below a map with the interim waste facility locations marked on is needed. It would be good to know if the existing refuse stores will be staying in place with increased capacities, or if they will be in different locations.
- The number of current residents, and the future estimated increase in residents, if known.
- The total size of the sites 1 – 5 altogether. We've worked out a rough figure from the drawings but was wondering if there was an official figure.

If you have any information on any of these queries which you could send over it would be much appreciated.

Kind regards,
Ceara Shields

Graduate Environmental Consultant
Environment

T +44 (0)20 7631 5291
D +44 (0)20 7927 8570
Ceara.Shields@ramboll.co.uk

From: Ceara Shields
Sent: 13 January 2014 11:22
To: 'Fiona@peterbarberarchitects.com'
Subject: Interim Waste Facility Locations

Hi Fiona,

Hope you're well.

I am attending the Kiln Place site tomorrow morning to carry out the waste assessment.

I've been looking at the drawings and found the two attached, which have three existing refuse stores labelled.

At your meeting with Colin in November, you pointed out four potential areas for the interim waste facilities. Do you have a map with these locations plotted, or could you send me the locations?

Kind regards,
Ceara Shields

Graduate Environmental Consultant
Environment

T +44 (0)20 7631 5291
D +44 (0)20 7927 8570
Ceara.Shields@ramboll.co.uk

_____

Ramboll UK Limited
60 Newman Street
London
W1T 3DA
www.ramboll.co.uk

Ceara Shields

From: Alice Brownfield <Alice@peterbarberarchitects.com>
Sent: 04 March 2014 11:14
To: Ceara Shields
Cc: Phil Hamilton; Georgina Dowling
Subject: Kiln Place - Interim Waste Strategy Review

Dear Ceara,

KILN PLACE – INTERIM WASTE LOCATIONS

Further to our meeting this morning, I have noted your comments (in bold below) on the proposed sizing of interim communal waste locations (please let me know if anything is incorrect):

- 117-164 Kiln Place: Interim Refuse Store location proposed within existing 'bulky white goods storage room' as indicated on 116_L_001 revD. Approx area of storage room 8sqm. **Ramboll confirmed sufficient.**
- 65-96 Kiln Place: Interim Refuse Store location proposed within new build footprint of Plot 3. Approx area of storage room 13 sqm. **Ramboll confirmed sufficient (noted actually only required to be 9sqm)**
- 1-64 Kiln Place: Interim Refuse Store location proposed as external enclosure to the north of Plot 4. Approximate area of external enclosure 8 sqm. **Ramboll confirmed sufficient.**
- 97-116 Kiln Place: Interim Refuse Store location proposed as external enclosure adjacent to Unit 5.3. Approximate area of external enclosure 8 sqm. **Ramboll confirmed insufficient, approx. 13sqm required near site 5.**

We have since reviewed the areas discussed and provide notes as follows:

Interim Storage Locations:

- As stated previously in Fiona's email on 27/01 it was noted that the current proposed strategy is for all the new dwellings aside from units 3.1, 3.2, 5.1, 5.2, 5.3 to individually store their refuse & recycling in their private front gardens. Units 3.1 and 3.2 will use the communal refuse storage area for 65-96 Kiln Place. Units 5.1, 5.2 & 5.3 will use the communal refuse storage area for 97-116 Kiln Place.
- Site 5 – External enclosure adjacent to unit 5.3 could be increased to 13sqm. I have reviewed this and it is possible to increase the size of the external enclosure, although this does create a fairly imposing and ungainly structure at this corner. Does this 13sqm external enclosure accommodate for a relocation of waste from waste location 6 (numbered in your Phase 1 report)? Or will Location 6 remain as it is? If Location 6 remains, would it be sensible to review whether we could increase the storage here slightly instead?
- As discussed, the intention is that the interim locations would only be required for the interim years until the underground Sulo system is installed. However, for the purposes of Planning, we need your report to confirm that these are viable locations which could remain in use in perpetuity should the underground system not be installed as currently planned.

Sulo:

- As discussed, you will liase with Camden regarding their desired approach and locations for the Sulo system.
- The public square opposite units 1.1, 1.2, 1.3 etc was noted as a possible location as no private windows from 117-164 look directly onto this space at ground floor, although it will be important to retain vehicular access to the garages and existing storage areas located there.
- The locations of proposed external enclosures near Site 4 and 5 where also identified as possible locations subject to Camden's comments and Ramboll's review of underground services.
- We have reviewed the triangular area in front of Site 3 and it is unlikely to be feasible for Sulo collection as it is bounded by a low level wall and railing, provides access to the front of Units 3.1 and 3.2, and is at a slightly lower level than the vehicular access along Kiln Place.

Please don't hesitate to call should you wish to discuss anything further.

Best Regards,
Alice

Alice Brownfield

For and on behalf of ***Peter Barber*ARCHITECTS**

UK Refurbishment Architect of the Year 2013
UK Housing Architect of the Year Finalist 2013
UK Masterplanning Architect of the Year Finalist 2012
UK Housing Architect of the Year 2010/11
UK Housing Architect of the Year 2007/08

Peter Barber Architects
173 Kings Cross Road
London WC1X 9BZ
www.peterbarberarchitects.com
t 020 7833 4499

Ceara Shields

From: Alice Brownfield <Alice@peterbarberarchitects.com>
Sent: 26 August 2014 15:03
To: Ceara Shields
Cc: David Gouldstone; Luke.Brooker@echarris.com; Georgina Dowling; Colin Bath
Subject: RE: Kiln Place - Interim and Permanent Waste Facility Locations

Dear Caera,

KILN PLACE – Interim Waste Locations

Thank you for your email. We had previously sized the interim refuse stores to the square meterage you provided for each location and assumed there was adequate uplift allowed for access and arrangement. However, further to your email below which details the size and no. of bins required in each location, we have drawn the required bins in each location allowing sufficient area for access, and the area required for some of the refuse stores is slightly larger than previously anticipated. As discussed, please see our comments below:

Location 5 & 7 – The external enclosures need to be slightly enlarged from your recommended area in order to allow for arrangement and access to the bins required in each location. We have increased these to be as follows: location 5 – 14.5m2 (GEA) , location 7 – 14.5m2 (GEA). These should now be adequate for the bins required.

Location 4 - It is possible to fit 3no. Continental Trade 1100 and 3no. Continental 1280 Recycling in the refuse store at location 4. However we are unable to fit the additional 1no. Continental 1280 Recycling and 1no. Continental 500 Recycling. Could these be located in one of the other interim locations proposed?

I look forward to hearing from you.

Best Regards,

Alice Brownfield

For and on behalf of ***Peter Barber*ARCHITECTS**

UK Refurbishment Architect of the Year 2013
UK Housing Architect of the Year Finalist 2013
UK Masterplanning Architect of the Year Finalist 2012
UK Housing Architect of the Year 2010/11
UK Housing Architect of the Year 2007/08

Peter Barber Architects
173 Kings Cross Road
London WC1X 9BZ
www.peterbarberarchitects.com
t 020 7833 4499

From: Ceara Shields [mailto:Ceara.Shields@ramboll.co.uk]
Sent: 12 August 2014 12:09
To: Alice Brownfield
Cc: Luke.Brooker@echarris.com; Colin Bath; Georgina Dowling
Subject: Kiln Place - Interim and Permanent Waste Facility Locations

Hi Alice,

Please see spreadsheet attached which includes the calculated areas required for the interim and the permanent waste locations at Kiln Place (columns to focus on are highlighted in yellow).

There are also two images of Kiln Place attached highlighting the location of each site for both interim and permanent.

In relation to the permanent waste strategy, the areas have been based on the Eco-Island refuse system which Camden Council asked us to look at instead of SULO. In addition, it should be noted that as the permanent waste locations will be underground the below ground survey was reviewed, and the infrastructure to avoid at each location is identified within the spreadsheet.

Finally please note that this information does not incorporate Site 6.

Please review and let us know if these locations and their areas are acceptable.

Many thanks,

Ceara

Kind regards,
Ceara Shields

Graduate Environmental Consultant
Environment

T +44 (0)20 7631 5291
D +44 (0)20 7927 8570
Ceara.Shields@ramboll.co.uk

_____

Ramboll UK Limited
60 Newman Street
London
W1T 3DA
www.ramboll.co.uk

Ceara Shields

From: Alice Brownfield <Alice@peterbarberarchitects.com>
Sent: 26 September 2014 14:51
To: Ceara Shields
Cc: Georgina Dowling; David Gouldstone; Luke.Brooker@echarris.com; poppy.carmody-morgan@quod.com; Farr, Julia; Barns, Colin; Colin Bath
Subject: RE: Kiln Place Waste Strategy - Site 6
Attachments: 116_sk_140926.pdf

Dear Ceara

KILN PLACE

Further to your email below, please find attached sketch which shows 3 Continental 1100 Trade bins, 2 Continental 1280 Recycling bins and 1 Continental 500 Recycling bin at location 4 as per your email below. We understand that the area of proposed location 3 (the existing white bulky goods store) is approximately 8m2 as per your report which states a requirement of 6.3m2.

Please don't hesitate to call me should you have any queries.

Best Regards,

Alice Brownfield

For and on behalf of ***Peter Barber*ARCHITECTS**

UK Refurbishment Architect of the Year 2013
UK Housing Architect of the Year Finalist 2013
UK Masterplanning Architect of the Year Finalist 2012
UK Housing Architect of the Year 2010/11
UK Housing Architect of the Year 2007/08

Peter Barber Architects
173 Kings Cross Road
London WC1X 9BZ
www.peterbarberarchitects.com
t 020 7833 4499

From: Ceara Shields [mailto:Ceara.Shields@ramboll.co.uk]
Sent: 19 September 2014 10:12
To: Alice Brownfield
Cc: Georgina Dowling; David Gouldstone
Subject: RE: Kiln Place Waste Strategy - Site 6

Hi Alice,

Following on from my email below, after a reconsideration of Location 3 and Location 4 based on the rearrangement of the bins and the waste capacity needed the following is proposed:

Location 3
3 Continental 1100 Trade bins and 1 Continental 1280 Recycling bin

Location 4
3 Continental 1100 Trade bins, 2 Continental 1280 Recycling bins and 1 Continental 500 Recycling bin

Does this work better with the design of the development?

Let me know your thoughts and I will update accordingly.

Many thanks,

Ceara

Kind regards,
Ceara Shields

Graduate Environmental Consultant
Environment

T +44 (0)20 7631 5291
D +44 (0)20 7927 8570
Ceara.Shields@ramboll.co.uk

From: Ceara Shields
Sent: 18 September 2014 16:39
To: 'Alice Brownfield'
Cc: Georgina Dowling; David Gouldstone
Subject: RE: Kiln Place Waste Strategy - Site 6

Hi Alice,

Apologies for my delayed response – I have been on annual leave.

Many thanks for the clarification of the bin locations for Site 6.

Regarding your email dated 26th August please see below regarding the interim waste strategy:

Locations 5 & 7
It has been noted that these locations have both been increased to 14.5m^2.

Location 4
As requested, I have been looking at the possibility of moving 1 Continental 1280 Recycling and 1 Continental 500 Recycling from Location 4 to Location 3. According to our calculations Location 3 would therefore require 10.8m^2 of space. Is this possible? If not, there is always the option of locating these two bins in Location 2.

Let me know and I will update accordingly.

Many thanks,

Ceara

Kind regards,
Ceara Shields

Graduate Environmental Consultant
Environment

T +44 (0)20 7631 5291
D +44 (0)20 7927 8570
Ceara.Shields@ramboll.co.uk

From: Alice Brownfield [mailto:Alice@peterbarberarchitects.com]
Sent: 08 September 2014 16:29
To: Ceara Shields
Cc: Georgina Dowling; David Gouldstone
Subject: RE: Kiln Place Waste Strategy - Site 6

Dear Ceara,

KILN PLACE – Waste Strategy Site 6

We would propose that the bins for Site 6 are located in the private front courtyard..

Are you able to respond to my email from the 26th August (attached). It is important we have a response from you regarding this as soon as possible.

Best Regards,

Alice Brownfield

For and on behalf of ***Peter Barber*ARCHITECTS**

UK Refurbishment Architect of the Year 2013
UK Housing Architect of the Year Finalist 2013
UK Masterplanning Architect of the Year Finalist 2012
UK Housing Architect of the Year 2010/11
UK Housing Architect of the Year 2007/08

Peter Barber Architects
173 Kings Cross Road
London WC1X 9BZ
www.peterbarberarchitects.com
t 020 7833 4499

From: Ceara Shields [mailto:Ceara.Shields@ramboll.co.uk]
Sent: 05 September 2014 16:38
To: Alice Brownfield
Cc: Georgina Dowling
Subject: Kiln Place Waste Strategy - Site 6

Hi Alice,

In regards to Site 6, please can you confirm how the waste will be dealt with?

Will there be bins in the private courtyard, or will they be using the communal refuse stores. If the latter, which refuse store will they be assigned to?

Many thanks,

Ceara

Kind regards,
Ceara Shields

Graduate Environmental Consultant
Environment

T +44 (0)20 7631 5291
D +44 (0)20 7927 8570
Ceara.Shields@ramboll.co.uk

_____

Ramboll UK Limited
60 Newman Street
London
W1T 3DA
www.ramboll.co.uk

APPENDIX B CAMDEN COUNCIL CONSULTATION RECORD

Ceara Shields

From: Colin Bath
Sent: 12 March 2014 12:00
To: Ceara Shields
Cc: Georgina Dowling
Subject: FW: refuse system

Hi Ceara,

Please see the below…

Can you review and see how feasible this alternative solution is?

Would this have an impact on what you are doing or would this just be a direct alternative (with no adverse implications) to the SULO system?

Kind regards

Colin

Colin Bath
Senior Project Manager
Project Management

T:+44 (0)23 8081 7710
M: +44 (0)7767 440573
colin.bath@ramboll.co.uk

From: Barns, Colin [mailto:Colin.Barns@camden.gov.uk]
Sent: 11 March 2014 15:32
To: Alice Brownfield (Alice@peterbarberarchitects.com)
Cc: Colin Bath; Yolanda.Edwards@echarris.com
Subject: refuse system

Hi all, please see an alternative refuse disposal system that could offer the benefits of the SULO underground solution but without requiring a special vehicle. I understand this has been found acceptable on other schemes in Camden. Here is the company that make the system: http://www.ecoisland.co.uk/

This might be an alternative approach to the surface bins?

Regards

Colin Barns
Development Manager
Repairs and Improvements
Housing and Adult Social Care
London Borough of Camden

Telephone: 020 7974 1447
Mobile: 07887 625580
Fax: 020 7916 2010
Web: camden.gov.uk
1st floor
33-35 Jamestown Road
London NW1 7DB

RECORD OF VERBAL COMMUNICATION

job title	**Camden Development Sites – Kiln Place**	job no.	**61031879**
date	**26.03.2014**	file ref.	
to	**Julia Farr**	by	**C Shields**
company	**Camden Council (CC)**	circulation	**C Shields**
tel no.	**020 7974 2642**		

Record of Communication	Action
CS contacted Julia Farr, CC's Senior Development Manager, regarding information on the preferred permanent waste facility system implementation. CS explained that an email had been sent by Colin Barns, CC's Development Manager, stating that Eco-Island may be a more suitable alternative to the SULO waste system. Julia Farr confirmed that the Eco-Island Underground Recycling & Refuse Storage System should be assessed instead of SULO. Benefits stated included that a special vehicle is not required to collect the waste and the system has been found acceptable on other schemes in Camden. Julia Farr informed CS to contact Ann Baker, CC's Principal Environmental Services Officer, to find out more information about Eco-Island. EOR	CS to carry out permanent waste facility locations calculations using Eco-Island as the system intended for implementation instead of SULO.

Ceara Shields

From: Baker, Ann <Ann.Baker@Camden.gov.uk>
Sent: 27 March 2014 15:29
To: Ceara Shields
Subject: RE: Kiln Place - Eco Island System

Dear Ceara,

Thanks for your email below and in response to the queries you raised:

- I don't have any experience of using the eco island systems but as long as you use standard eurobin sizes (any size from 500 litres upwards) we will be able to service them. Dimensions of the standard eurobins can be found at http://www.taylorbins.co.uk/products/continental-recycling
- It is correct that the same vehicles that currently collect our refuse and recycling will be able to service the eurobins mentioned above.
- I have only seen the eco island systems used for underground storage. For storage above ground we (Camden Council) use wheelie bins and eurobins which are usually kept in designated bin storage areas.

I have also copied in Mark Hunt our Area Monitoring Manager who has detailed knowledge about our collection arrangements, containers and waste storage solutions for information.

Please let me know if there is anything else you need concerning this.

Kind regards

Ann Baker
Principal Environmental Services Officer

Telephone: 020 7974 8998

From: Ceara Shields [mailto:Ceara.Shields@ramboll.co.uk]
Sent: 26 March 2014 16:33
To: Baker, Ann
Subject: Kiln Place - Eco Island System

Hi Ann,

I was told to contact you by Julia Farr regarding my queries on Eco Island.

I am currently in the process of writing the Phase 2 Waste Strategy for Kiln Place, and I have been asked to include information on the possible implementation of the Eco Island waste system.

I had a few queries which I was hoping you would be able to answer. They are as follows:

- Are there any specific requirements in terms of the Eco Island bin dimensions?
- I was informed that the Eco Island bins require the same waste collection vehicles as the current bins, is this correct?
- I was also informed that the Eco Island bins can be installed underground and above ground, is this also correct?

Any help you can give would be much appreciated.

Many thanks.

Kind regards,
Ceara Shields

Graduate Environmental Consultant
Environment

T +44 (0)20 7631 5291
D +44 (0)20 7927 8570
Ceara.Shields@ramboll.co.uk

_____

Ramboll UK Limited
60 Newman Street
London
W1T 3DA
www.ramboll.co.uk

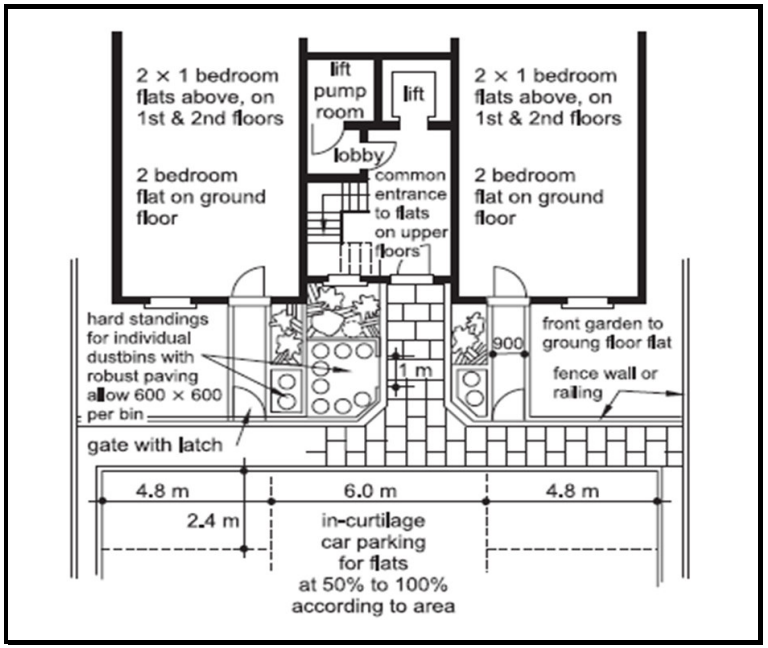
APPENDIX C ABOVE-GROUND WASTE FACILITY LOCATIONS INFORMATION

Interim Waste Facility Locations Information

Site: Kiln Place, Camden

Job number: 61031879

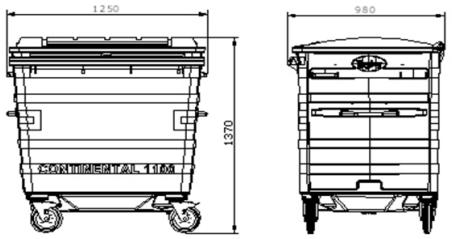
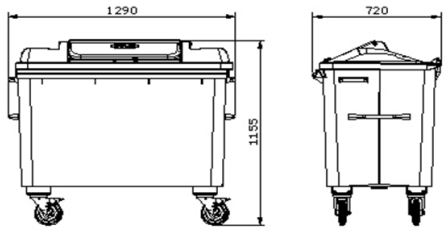
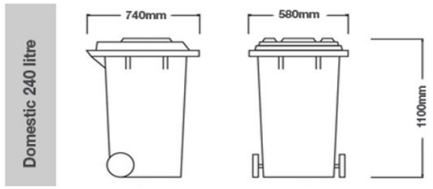
External planning for typical three-storey block of ten flats showing refuse storage



Interim Waste Facility Locations Calculations

Interim Site	Bin Type	Bin Footprint (sqm)	Number of bins	Area Needed (sqm)	% Uplift	Total (excl. uplift)	Total (incl. uplift)	Area assigned by Architect (sqm)	Difference (incl. uplift)
1	**Wheelie Bin**	0.4292	1	0.4292	0.55796	0.4292	0.55796	N/A	N/A
2	**Continental 1280 Recycling**	1.2411	2	2.4822	3.22686	3.411	4.4343	N/A	N/A
	Continental 500 Recycling	0.9288	1	0.9288	1.20744				
3	**Continental Trade 1100**	1.225	3	3.675	4.7775	4.9161	6.39093	8	1.60907
	Continental 1280 Recycling	1.2411	1	1.2411	1.61343				
4	**Continental Trade 1100**	1.225	3	3.675	4.7775	7.086	9.2118	13	3.7882
	Continental 1280 Recycling	1.2411	2	2.4822	3.22686				
	Continental 500 Recycling	0.9288	1	0.9288	1.20744				
5	**Continental Trade 1100**	1.225	3	3.675	4.7775	5.8449	7.59837	14.5	6.90163
	Continental 1280 Recycling	1.2411	1	1.2411	1.61343				
	Continental 500 Recycling	0.9288	1	0.9288	1.20744				
6	**Continental Trade 1100**	1.225	4	4.9	6.37	8.311	10.8043	N/A	N/A
	Continental 1280 Recycling	1.2411	2	2.4822	3.22686				
	Continental 500 Recycling	0.9288	1	0.9288	1.20744				
7	**Continental Trade 1100**	1.225	4	4.9	6.37	6.1411	7.98343	14.5	6.51657
	Continental 1280 Recycling	1.2411	1	1.2411	1.61343				
8	**Continental Trade 1100**	1.225	3	3.675	4.7775	3.675	4.7775	N/A	N/A
Total		**N/A**	**N/A**	**39.8143**	**51.75859**	**39.8143**	**51.75859**	**N/A**	**N/A**

Interim Bin Types

Bin Type	Width (m)	Depth	Area (sqm)	Volume (l)	Diagram
Continental Trade 1100	1.25	0.98	1.225	1100	
Continental 1280 Recycling	1.26	0.985	1.2411	1280	
Continental 500 Recycling	1.29	0.72	0.9288	500	
Wheelie Bin	0.74	0.58	0.4292	240	

APPENDIX D ECO-ISLAND CONSULTATION RECORD

Ceara Shields

From: Ceara Shields
Sent: 23 May 2014 11:51
To: 'enquiries@ecoisland.co.uk'
Subject: Waste Storage Areas Measurements

Hi,

I had a query regarding the dimensions required for your bin systems.

Are the measurements for the waste storage areas on your website the only space required, or would additional area be required for access for waste collection?

Any information you could give would be much appreciated.

Many thanks.

Kind regards,
Ceara Shields

Graduate Environmental Consultant
Environment

T +44 (0)20 7631 5291
D +44 (0)20 7927 8570
Ceara.Shields@ramboll.co.uk

APPENDIX E UNDERGROUND REFUSE COLLECTION TRIP PHOTOS

KILN PLACE, CAMDEN
BELOW GROUND REFUSE COLLECTION TRIP PHOTOS

	
Photo 1: External surface view of the SULO underground waste containers.	**Photo 2:** Special waste collection vehicle required for the SULO underground waste containers.
	
Photo 3: Special waste collection vehicle in process of lifting a SULO underground waste container out of the ground.	**Photo 4:** Special waste vehicle in process of emptying a SULO underground waste container.
	
Photo 5: Internal view of the SULO underground waste system.	**Photo 6:** SULO underground waste system located in close proximity to car parking space.

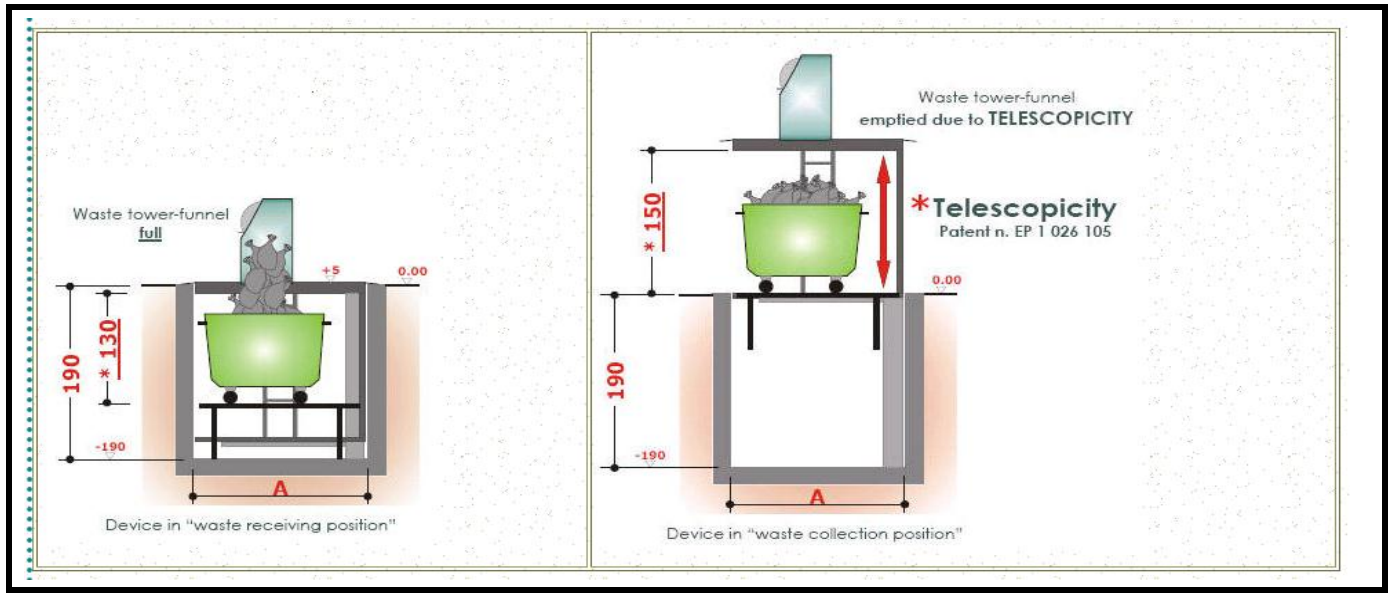
APPENDIX F UNDERGROUND WASTE FACILTY LOCATIONS INFORMATION

Permanent Waste Facility Locations Information

Site: Kiln Place, Camden

Job number: 61031879

Eco-Island Waste System



Permanent Waste Facility Locations Calculations

Site	Bin Type	Bin Footprint (sqm)	Bin Volume (l)	Volume required (l)	Number of bins needed	Volume available (l)	Extra volume	Area Needed (sqm)	% Uplift	Total (excl. uplift)	Total (incl. uplift)
1	General Waste	1.2411	1280	2200	2	2560	360	2.4822	2.97864	6.2055	7.4466
	General Recycling	1.2411	1280	1920	2	2560	640	2.4822	2.97864		
	Food Waste	1.2411	1280	250	1	1280	1030	1.2411	1.48932		
2	General Waste	1.2411	1280	4675	4	5120	445	4.9644	5.95728	9.9288	11.91456
	General Recycling	1.2411	1280	2880	3	3840	960	3.7233	4.46796		
	Food Waste	1.2411	1280	375	1	1280	905	1.2411	1.48932		
3	General Waste	1.2411	1280	5500	6	7680	2180	7.4466	8.93592	12.411	14.8932
	General Recycling	1.2411	1280	3520	3	3840	320	3.7233	4.46796		
	Food Waste	1.2411	1280	500	1	1280	780	1.2411	1.48932		
4	General Waste	1.2411	1280	3480	3	3840	360	3.7233	4.46796	6.2055	7.4466
	General Recycling	1.2411	1280	0	1	1280	1280	1.2411	1.48932		
	Food Waste	1.2411	1280	0	1	1280	1280	1.2411	1.48932		
Total		**N/A**	**N/A**	**25300**	**28**	**35840**	**10540**	**34.7508**	**41.70096**	**34.7508**	**41.70096**