ABERFELDY VILLAGE (PHASE A)

PRE-DEMOLITION AUDIT

PROJECT NO. 4060/1100 DOC NO. D014

DATE: SEPTEMBER 2022

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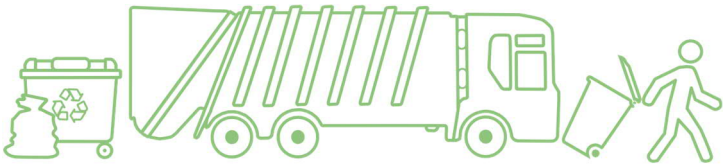
CLIENT: ABERFELDY VILLAGE LLP

Velocity Transport Planning Ltd

www.velocity-tp.com



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Notes

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1 EXECUTIVE SUMMARY

This report aims to identify and quantify where the key materials and components are present within the existing buildings of Aberfeldy Village (Phase A) and to further identify the potential recycling or reuse strategy for them.

Recommendations made within this report are based on the findings of the pre-demolition audit conducted by Velocity Transport Planning, including a non-intrusive site survey on 12th September 2022.

The information in this report demonstrates the benefits of recycling and re-use of KDPs based on economic value, the number of units and viability of deconstruction.

The demolition proposals include four sites of residential, commercial and community use buildings, as well as one vacant plot.

In total it is estimated that 42,298.07 tonnes of material will be generated by the demolition process. It is not anticipated that there are any materials on site suitable for reclamation.

Inert materials and mixed metals were identified as the KDPs on site, which represent 97.79% of the total tonnage of material generated by the demolition process. These materials can achieve a recycling rate of 100%, through a combination of on-site segregation and subsequent processing.

2 PROJECT INTRODUCTION

2.1 INTRODUCTION

2.1.1 This Pre-Demolition Audit (PDA) has been undertaken for Aberfeldy Village LLP and contributes towards the Site Waste Management Plan and Circular Economy Statement for Phase A of the Aberfeldy Village development proposals. The purpose of the audit is to identify and quantify where the key materials and components are present within the existing buildings, and to further identify the potential recycling or reuse strategy for them.

2.1.2 This report identifies materials and components for potential reuse or recycling from structures and hard landscaped areas due for demolition once all furniture and loose items have been removed.

2.1.3 The information in this report will help to demonstrate the benefits of recycling and re-use of Key Demolition Products (KDPs) based on economic value, the number of units and viability of deconstruction.

2.1.4 The findings and values contained in this report represent the best estimate of the materials and components based on the information available for the structures within the scope of the project. Estimates were made using the following information (where available):

- Architectural Plans
- Site surveys; and
- Photographs.

2.2 COMPETENCY – PROJECT MANAGER

2.2.1 The project manager was Peter Hambling who is a Chartered Waste Manager working for the past 11 years within the resource and waste management industry. His background began in environmental compliance and his experience includes contract management, waste stream analysis, collection methodologies and infrastructure development. With experience working for a construction waste contractor, commercial waste contractor and within a local authority as well as development planning, he has comprehensive understanding of the subject matter.

2.3 PROJECT SCOPE

2.3.1 The scope of the project includes the buildings and hard landscaped areas due for demolition as part of Phase A of the Aberfeldy Village masterplan, located within the administrative boundary of the London Borough of Tower Hamlets (LBTH).

2.3.2 Figure 2-1 below shows the extent of Phase A of the Aberfeldy Village masterplan.

Figure 2-1 Aberfeldy Village Phase A

2.3.3 The buildings and hard landscaped areas due for demolition are as follows:

- Blairgowrie Court;
- Aberfeldy Street West;
- Aberfeldy Street East;
- Aberfeldy Neighbourhood Centre; and
- Lochnagar Street.

2.3.4 The audit will cover the following content:

- Identification and quantification of the key materials where present on the project
- Potential applications and any related issues for the re-use and recycling of the key materials in accordance with the waste hierarchy
- Identification of local re-processors or recyclers for recycling materials
- Identification of overall recycling rate for all key materials
- Identification of reuse targets where appropriate
- Identification of overall landfill diversion rate for all key materials

2.4 AUDIT METHODOLOGY

2.4.1 This audit is based on a non-intrusive survey methodology; a site visit was conducted on Monday 12th September 2022 by the project team with access granted by the building owner to vacant areas and tenanted areas with prior permission. A thorough inspection was made of the structures and external areas where possible, though inaccessible areas such as rooves were not included within the survey.

2.4.2 Site plans were available for some of the buildings, predominantly obtained through the publicly accessible planning records as well as other sources. Where details of construction methodology were not included on the plans, appropriate assumptions have been made to facilitate the audit results, based on industry knowledge.

2.4.3 The scope of the audit does not include any loose items or furniture but does include fittings such as kitchens and bathrooms where they were encountered during the site visit.

2.4.4 Where information is not available to inform the audit results, suitable assumptions have been made using relevant published material and prior knowledge based on industry experience.

2.4.5 Hazardous wastes such as Asbestos Containing Materials (ACM) including fibrous insulation or floor tiles are not included within the audit findings. It is recommended that a dedicated asbestos survey is commissioned, and all materials removed by an appropriately licenced contractor prior to demolition works.

2.4.6 Following the site visit and desktop study, the information was analysed to identify the principal material types present within the buildings. These materials were consolidated and established as the Key Demolition Products (KDPs) with total quantities provided in addition to recommendations for their reuse, recycling, or disposal. These recommendations are based on assumptions regarding material conditions and should be considered indicative, subject to refinement by the appointed demolition contractor.

2.5 KEY DEFINITIONS

2.5.1 To inform the audit process and results, key definitions were established.

2.5.2 Reclamation is reuse of a material or product in the same form. An example of reclamation is the removal of carpet tiles from an office for reuse in another location.

2.5.3 Recycling is reprocessing of a material of product for an alternative use. An example of recycling is crushing of house bricks (on- or off-site) for use within secondary aggregate materials.

2.5.4 Closed loop recycling is the process by which a product is used, recycled, and then made into a new product again without losing any of its material properties. An example of materials suitable for closed loop recycling are aluminium cans, which can be reprocessed multiple times in to the same product.

2.5.5 Open loop recycling is where the recycled materials are converted into both new raw materials and waste product. Typically, materials recycled through open-loop recycling go on to be used for purposes different from their former purpose. This means that the input into the recycling process is converted to a new raw material, which can be used as an input into another manufacturing process. An example of open loop recycling is plastic water bottles that are reprocessed to provide material for sleeping bags or fleece jackets.

3 DEMOLITION PROPOSALS

3.1 PROPOSALS

3.1.1 The demolition proposals include four sites of residential, commercial and community use buildings, as well as one vacant plot.

3.1.2 The buildings are planned for demolition as they are no longer fit for purpose and do not meet current standards.

3.1.3 The development proposals comparatively represent significant improvements in terms of energy efficiency, future climate adaptation and overall quality for residents.

3.1.4 Deconstructing the existing structures to reclaim components or materials (rather than traditional demolition) is considered unfeasible due to the small site footprint and proximity to a number of sensitive neighbouring uses.

3.1.5 Further, the existing buildings are constructed in a manner that does not facilitate repurposing specific elements or reclamation of materials, with demolition considered the only viable option.

3.1.6 The new development proposals will represent a move towards methods of construction that incorporate circular economy principles.

3.1.7 The following sections will provide a summary of existing structures and hard landscaping for each site planned for demolition.

3.2 BLAIRGOWRIE COURT

3.2.1 Blairgowrie Court is located on Blair Street, adjacent to the earlier phases of the Aberfeldy Village development.

3.2.2 It is a residential building ranging between three and six storeys constructed in the early 2000s. The layout internally is uniform with 30no. identical 2-bedroom dwellings, one central core and an external access deck.

3.2.3 Access was granted to vacant units and common areas within the building to conduct the survey.

3.2.4 Figure 3-1 and Figure 3-2 below show the building exterior.

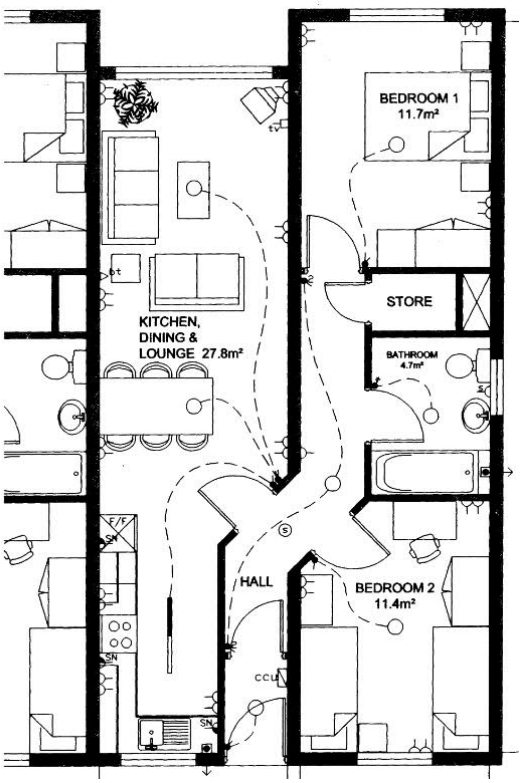
Figure 3-1 Building Exterior - Frontage

Figure 3-2 Building Exterior - Rear

3.2.5 The building is currently vacant, with all fixtures and fittings removed from kitchens and bathrooms.

3.2.6 Figure 3-3 below shows the typical floorplan for each of the residential units.

Figure 3-3 Example Floorplan



3.3 ABERFELDY STREET (WEST & EAST)

3.3.1 Two of the buildings proposed for demolition are on either side of Aberfeldy Street, with commercial uses at ground level and residential units above of assumed standard construction type.

3.3.2 For the purpose of the audit, the buildings have been termed as follows:

- Aberfeldy Street West (No. 25-55); and
- Aberfeldy Street East (No. 36-50).

3.3.3 Both buildings are 3 storeys and understood to be constructed between the 1950-60s with central stair cores and external access decks. Within each block the residential units were uniform in their composition as 3-bedroom maisonettes with an external terrace.

3.3.4 The residential element of each building is currently vacant, with all fixtures and fittings removed from kitchens and bathrooms. The commercial parts remain occupied, with an anticipated transfer to alternative premises within the Aberfeldy Village masterplan prior to demolition works.

3.3.5 It is expected that all commercial equipment would be removed and transferred to the new business premises for reuse.

3.3.6 Access was granted to vacant residential units as well as common areas. Access was possible to the ground floor commercial units with tenant permission.

3.3.7 Figure 3-4 shows a plan view of Aberfeldy Street.

Figure 3-4 Aberfeldy Street Plan View

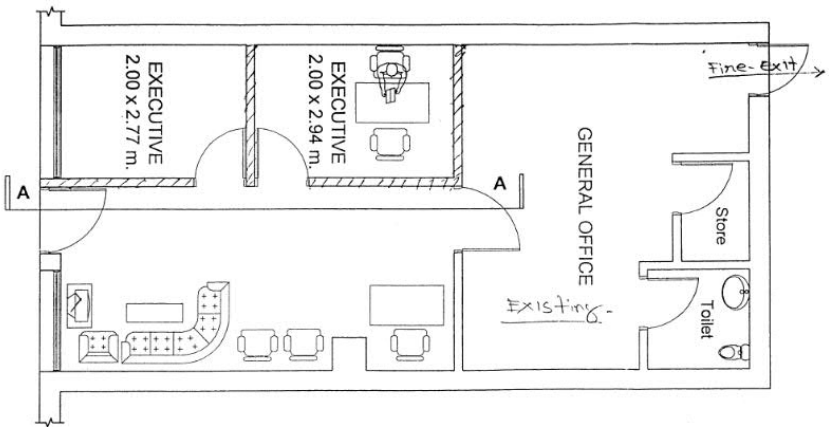
3.3.8 Figure 3-5 and Figure 3-6 below show the building exterior of Aberfeldy Street West.

Figure 3-5 Building Exterior – Frontage

Figure 3-6 Building Exterior - Rear

3.3.9 Figure 3-7 below shows the typical floorplan for one of the sixteen commercial units at ground floor level in Aberfeldy Street West.

Figure 3-7 Example Floorplan - Commercial



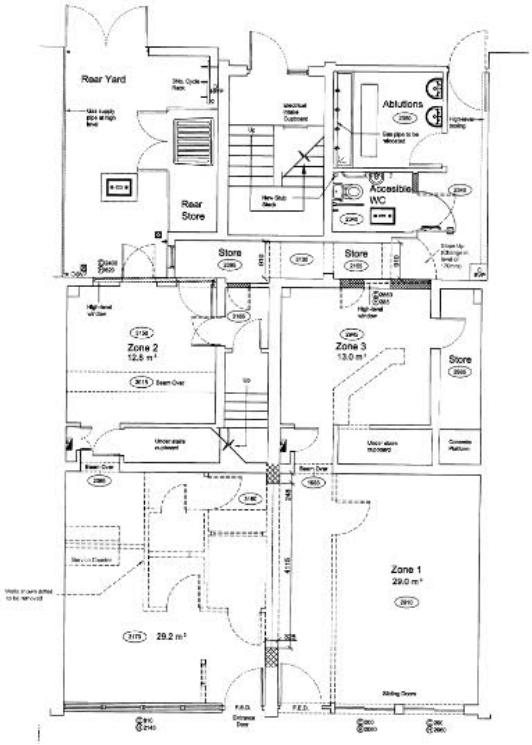
3.3.10 Figure 3-8 and Figure 3-9 below show the building exterior of Aberfeldy Street East.

Figure 3-8 Building Exterior – Frontage

Figure 3-9 Building Exterior - Rear

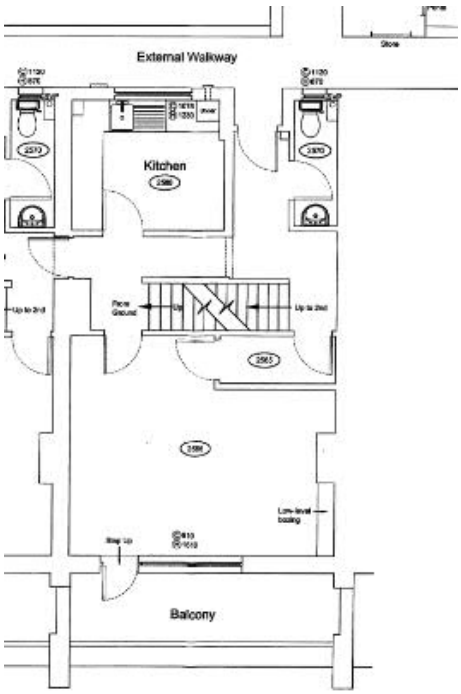
3.3.11 Figure 3-10 below shows the typical floorplan for two of the eight commercial units at ground floor level in Aberfeldy Street East.

Figure 3-10 Example Floorplan – Ground Floor



3.3.12 Figure 3-11 below shows a floorplan for one of the residential units in Aberfeldy Street East.

Figure 3-11 Example Floorplan - Residential First Floor Level



3.4 ABERFELDY NEIGHBOURHOOD CENTRE

3.4.1 The Aberfeldy Neighbourhood Centre on the corner of Aberfeldy Street and Dee Street.

3.4.2 It is a one storey building currently in use as community centre (including a nursery, computer suite and small café) of standard construction, built in the early 2000s.

3.4.3 To the rear is a MUGA that is available for public hire.

3.4.4 Access was granted to common areas within the building to conduct the survey.

3.4.5 Figure 3-12 below shows the exterior frontage of the building from Aberfeldy Street.

Figure 3-12 Building Exterior – Aberfeldy Street Frontage

Figure 3-13 Neighbourhood Centre MUGA

3.5 LOCHNAGAR STREET

3.5.1 The site located at Lochnagar Street is currently a vacant plot with overgrown vegetation.

3.5.2 It was not possible to access the site during the survey.

3.5.3 Figure 3-14 below shows the Lochnagar Street site viewed from Bromley Hall Road.

Figure 3-14 Lochnagar Street

4 PRE-DEMOLITION AUDIT RESULTS

4.1 OVERALL VOLUMES OF WASTE PRODUCED FROM DEMOLITION

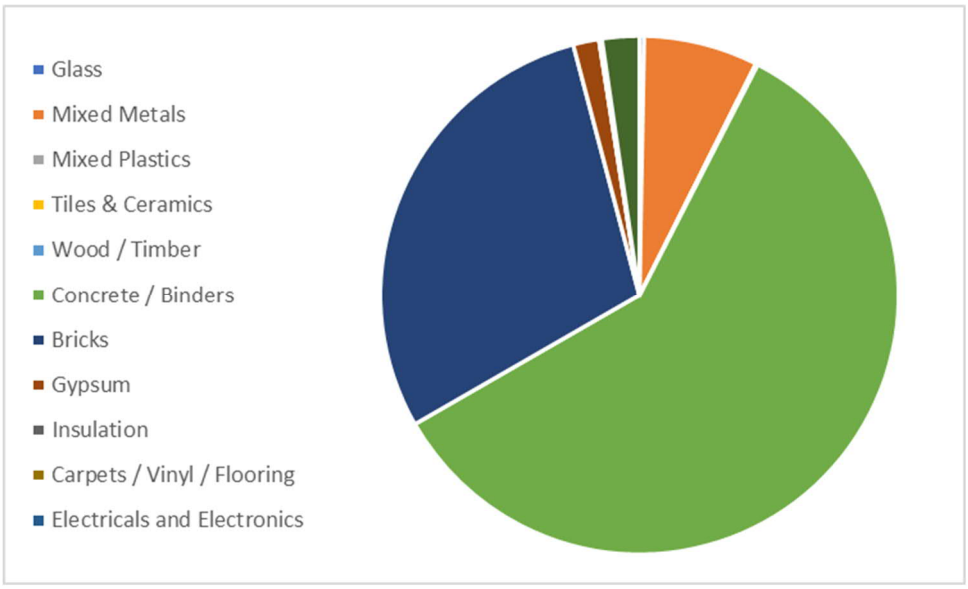
4.1.1 Table 4-1 below shows the estimated weight of materials generated by the demolition process.

Table 4-1 Summary of Demolition Waste Generated

Material	Tonnes	% By Weight
Glass	122.40	0.29
Mixed Metals	3,017.32	7.13
Mixed Plastics	13.20	0.03
Tiles & Ceramics	16.90	0.04
Wood / Timber	23.84	0.06
Concrete / Binders	25,018.45	59.15
Bricks	12,342.52	29.18
Gypsum	681.39	1.61
Insulation	6.21	0.01
Carpets / Vinyl / Flooring	40.90	0.10
Electricals and Electronics	31.69	0.07
Asphalt	983.25	2.32
Mixed	-	0.00
Total	42,298.07	

4.1.2 Figure 4-1 below shows the percentage of each waste stream by weight, as per Table 4-1

Figure 4-1 Waste Streams by Weight



5 KEY DEMOLITION PRODUCTS

5.1 IDENTIFICATION OF KEY DEMOLITION PRODUCTS

5.1.1 This section of the report discusses the KDPs that have been identified for the sites following analysis of the audit findings. The KDPs present on site represent an estimated 97.79% of all waste occurring on site.

5.1.2 The two KDPs identified are as follows:

- Inert Materials; and
- Metals.

5.2 BEST PRACTICE METHODOLOGIES

5.2.1 There are some general methods of good practice to be considered during any demolition project looking to maximise the reuse and recycling of materials. These measures include the following:

- Agree targets for reclamation and recycling as part of the demolition management plan;
- During the strip-out/demolition phase, details of the actual materials arising and the waste management methods used should be recorded to compare actual with forecast and to assess performance against the targets set.
- Following completion of the project, any barriers to achieving the targets should be reviewed to ensure that in future projects these barriers can be overcome.
- Early promotion of available materials for reclamation through appropriate channels, particularly community projects;
- Contact local architectural salvage contractors to discuss if there are items they would be interested in reclaiming;
- Provide space on site for reclaimed materials in addition to segregated containers per waste stream;
- Use resources such as SalvoWeb[1] that provide a directory of business dealing with salvaged items;
- Provide separate containers per waste stream on site to maximise recycling rates;
- Ensure demolition operatives are appropriately trained to recognise materials and understand how to segregate them correctly;
- Where it is not possible to recycle materials due to their composition, seek a commercial waste contractor who diverts waste from landfill and sends residual waste for energy recovery.

[1] https://www.salvoweb.com/

5.3 INERT MATERIALS

5.3.1 The predominant KDP on site has been identified as inert materials, representing 90.65% of the total material on site. The inert materials are a group of materials that are handled and processed in the same manner during demolition and subsequent processing.

5.3.2 The inert materials generated by the demolition process are located within the following elements on site:

- Structural building frame;
- Internal walls;
- External walls; and
- Areas of hard landscaping.

5.3.3 Figure 5-1 below shows example of inert materials present on site.

Figure 5-1 KDP Example - Inert

5.3.4 Table 5-1 below summarises the quantities of these materials on site generated by the demolition process, categorised by European Waste Catalogue (EWC) code.

Table 5-1 Quantity of Inert Materials

Material	EWC Code	Tonnage	Recommended Processing (%)	
			Reclamation	Recycling
Bricks	17 01 02	12,343	0	100
Tiles and Ceramics	17 01 03	16.9	0	100
Concrete / Hardcore	17 01 07	25,018	0	100
Asphalt	17 03 02	983	0	100
Total		38,361	0	100

RECOMMENDATIONS

5.3.5 Inert materials are the predominant KDP generated by the demolition process on site. The potential for reclamation of inert materials is relatively low due to their use, composition, and material qualities.

5.3.6 It is possible to reclaim bricks for reuse within another structure, though for this to be feasible the bricks are required to be of high quality to justify the resource and space required to recover them on site.

5.3.7 It is expected that all of the inert materials generated by the demolition process will be recycled to form secondary aggregate either on- or off-site.

5.3.8 Inert materials are processed using a crusher which reduces their fraction size.

5.3.9 Figure 5-2 shows an example crusher being loaded with inert materials.

Figure 5-2 Example Crusher

5.3.10 Crushed materials could be used for engineered fill on- or off-site, and at is expected that the material would be processed in accordance with prevailing guidance to ensure the secondary aggregate meets all requirements with regard to material properties.

5.3.11 The most efficient method of processing the materials would be to phase the demolition to allow space for on-site crushing, though this may not be possible due to the small footprint of the sites and the proximity to neighbouring residential properties.

5.3.12 Crushing the inert materials on site would reduce the number of vehicle movements associated with the demolition process. If the material is being used on-site as engineered fill, the requirement for imported material is decreased, and if it is being transferred for use off-site the volume of the material is reduced when loaded.

5.3.13 On-site crushing would be subject to the demolition contractor obtaining a permit from the relevant authority, to ensure operations would not adversely impact the environment with noise or dust generated.

5.3.14 If it is not possible to crush the inert materials on site, they would be transferred an appropriately licenced nearby facility for processing and subsequent use.

5.3.15 It is anticipated that crushed inert material would be transported in 32-tonne tipper lorries.

5.3.16 Figure 5-3 below shows a 32-tonne tipper lorry being loaded with crushed concrete.

Figure 5-3 Example 32-Tonne Tipper Lorry

5.3.17 The landfill diversion rate for the inert materials on site would be anticipated to be 100%.

5.4 METALS (FERROUS/NON-FERROUS)

5.4.1 The second KDP on site has been identified as metals, with use across all structures for a number of purposes.

5.4.2 The metal generated by the demolition process are located within the following elements on site:

- Structural building frame;
- Mechanical and Electrical Plant (MEP);
- Balconies;
- Doors and windows;
- Walls;
- Lifts and stairs;
- Roof; and
- Pipes and ducting.

5.4.3 Figure 5-4 below shows examples of metals present on site.

Figure 5-4 KDP Example - Metal

5.4.4 Table 5-2 below summarises the quantities of metals on site generated by the demolition process, including the EWC code.

Table 5-2 Quantity of Metals

Material	EWC Code	Tonnage	Recommended Processing (%)	
			Reclamation	Recycling
Mixed Metals	17 04 07	3,017	0	100

RECOMMENDATIONS

5.4.5 Metal is the second most prevalent material expected to be generated by the demolition process. A number of metal types are to be found within the structures and external areas.

5.4.6 Reuse of structural metal (such as rebar within reinforced concrete) is not possible due to the manner in which it is extracted.

5.4.7 Whilst there is a small potential that some of the metals with the external areas such as fencing could be reused , this is considered unlikely due to logistical constraints. Reuse of these elements would likely require designated locations to transfer directly to at the time of demolition.

5.4.8 It is recommended that segregated containers for metal generated by the demolition process are used to ensure that all waste metal is captured.

5.4.9 Scrap metal is usually stored in skips or roll-on roll-off containers on site for before transfer to an appropriately licenced facility.

5.4.10 An example 40yd^3 container is shown in Figure 5-5 below.

Figure 5-5 Example 40yd³ Roll-On Roll-Off Container

5.4.11 Scrap metal has a value by weight and will generate a rebate based on the quality of the material.

5.4.12 The landfill diversion rate for the metals on site would be anticipated to be 100%.

5.5 LOCAL LICENCED WASTE CARRIERS

5.5.1 Table 5-3 below details a selection of licenced waste carriers local to the site that could be contracted to facilitate removal of waste materials.

Table 5-3 Local Waste Carriers

Waste Contractor	Waste Carrier Licence	Address	Contact	Distance (Miles)
O'Donovan Waste Disposal	CBDU116673	82 Markfield Road N15 4QF	02088019561	7
GBN Leyton	CBDU90075	GBN Services, Estate Way, Church Road, E10 7JN	0203 887 5345	5
GBN Canning Town	CBDU90075	GBN Services Ltd, Canning Town Depot, 11a Cody Road Business Centre, South Crescent, Canning Town E16 4TL	020 7987 2220	2
Bywaters	CBDU100793	Bywaters (Leyton) Twelvetrees Crescent E3 3JG	07721 647392	1.5
Norris Greenwich	CBDU89511	Station Approach, Orpington, BR5 2NB	01689806420	12
Powerday PLC	CBDU123332	32 Stephenson Street Canning Town London E16 4SA	02089604646	1.6

6 SUMMARY AND CONCLUSIONS

6.1 SUMMARY

6.1.1 The purpose of the audit is to identify and quantify where the key materials and components are present within the existing buildings, and to further identify the potential recycling or reuse strategy for them.

6.1.2 This report identifies materials and components for potential reuse or recycling from structures and hard landscaped areas due for demolition once all furniture and loose items have been removed.

6.1.3 This report helps to demonstrate the benefits of recycling and re-use of identified KDPs based on economic value, the number of units and viability of deconstruction.

6.1.4 The scope of the project includes the buildings and hard landscaped areas due for demolition as part of Phase A of the Aberfeldy Village masterplan, located within the administrative boundary of the London Borough of Tower Hamlets.

6.1.5 The two KDPs on site identified are as follows:

- Inert Materials; and
- Metals.

6.1.6 The two KDPs present on site represent an estimated 97.79% of all waste occurring on site.

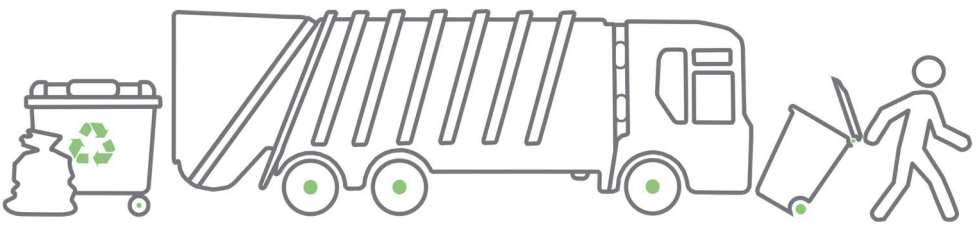
6.1.7 The landfill diversion rate for the KDPs on site would be anticipated to be 100%.

6.1.8 There are a number of waste carriers within the local area licenced to carry waste materials from site.

6.2 CONCLUSION

6.2.1 This Pre-Demolition Audit has taken into account the need to lessen the overall impact of waste generation through the reclamation and recycling of materials from the demolition phase of the Aberfeldy Village Development (Phase A).

6.2.2 The proposals set out in this strategy meet the requirements of relevant waste policy and follow applicable guidance.



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