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Garocal Ltd.

Lands to rear of The Copper Kettle Coffee Shop, Main Street, Rathcoole, Co. Dublin

Outline Construction Management Plan (Response to Request for Further Information)

Date: 16th December 2022

DONNACHADH O'BRIEN
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Contents

1 Introduction

Donnachadh O' Brien and Associates Consulting Engineers (DOB&A) act on behalf of Garocal Ltd. and provide this Outline Resource Waste Management Plan (RWMP), formerly referred to as a Construction & Demolition Waste Management Plan (CDWMP), as a response to the following parts of Item 4 of the further information request (RFI) issued by South Dublin County Council (SDCC) on the 24th March 2022 in relation to proposed development of lands to the rear of The Copper Kettle Coffee Shop, Main Street, Rathcoole, Co. Dublin (Ref: SD22A/0023).

4. The applicant is requested to provide the following information to facilitate a complete assessment of the access and parking arrangments for the proposed development:

- a detailed Construction Traffic Management Plan.
- a Construction & Demolition Waste Management Plan (C&DWMP), to include details of the number of loads, haulage routes, times of works, etc.
- a site layout plan of not less than 1:100 scale, showing a swept path analysis drawing (i.e. AutoTRAK or similar) demonstrating
  (a) how cars access/egress the proposed new parking spaces
  (b) that fire tenders and large refuse vehicles can access/egress the site.

The proposed development includes construction of a dwelling serviced by private amenity space to the rear and an on curtilage vehicular parking space accessible via Barrack Court; the provision of 2 replacement vehicular parking spaces for use by residents of Barrack Court; and all ancillary works necessary to facilitate development.

The following drawings are attached with this Outline Construction Management Plan in response to Item 4 of the RFI:

2275-DOB-XX-SI-DR-C-0070 Autotrack

2 Methodology

This outline Construction CDWMP, now referred to as a Resource Waste Management Plan (RWMP), has been prepared in accordance with the requirements of the Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects published by the EPA in 2021 (hereafter referred to as the 2021 Guidelines).

The 2021 Guidelines supersede the Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects' produced by the NCDWC in June 2006 (hereafter referred to as the 2006 Guidelines).

Section 3.1 of the 2021 Guidelines recommends thresholds for the likely scale and complexity of an RWMP. Developments are classed as either Tier 1, smaller scale or Tier 2, larger scale.

Developments below the following thresholds may be classed as Tier1 and developments above are classed as Tier 2:

- New residential development of < 10 dwellings;
- Retro-fit of 20 dwellings or less;
- New commercial, industrial, infrastructural, institutional, educational, health and other developments with an aggregate floor area < 2,000m2, and;
- Demolition projects generating in total <100m3 in volume of C&D waste.

The Project comprises a single dwelling and therefore falls below the thresholds and is classed as a Tier 1 development.

The RWMP covers the following areas:

- Introduction or Overview – to include commitments and policies of the operator, overview of relevant legislation etc.
- Project Description to include location, history, and proposed demolition (if any), material balance, project programme and description etc.
- Roles and Responsibilities assigned to manage resource efficiency and waste out.
- Key Materials, quantities and costs.
- Site Management and Infrastructure.
- Audits & Inspections
- Construction Traffic Management Plan

3 Resource Waste Management Plan (RWMP) Overview

As outlined in the 2021 Guidelines, waste management legislation and policy have evolved towards prioritising waste prevention and lifecycle thinking as waste management has evolved over time.

3.1 EU Context

8th Action Programme

The EU 8th Environmental Action Programme (EAP) came into force on 2nd May 2022 as the EU's legally agreed common agenda for environmental policy until 2030. It builds on the European Green Deal designed to overcome the challenges of climate change and environmental degradation and to transform the EU into a modern resource efficient and competitive economy.

The action programme reiterates the EU's long-term vision to 2050 of living well, within planetary boundaries. It sets out priority objectives for 2030 and the conditions needed to achieve these. The action programme aims to speed up the transition to a climate-neutral, resource-efficient economy, recognising that human wellbeing and prosperity depend on healthy ecosystems.

The 8th EAP has 6 inter-linked thematic priority objectives including:

> advancing towards a well-being economy that gives back to the planet more than it takes and accelerating the transition to a non-toxic circular economy where growth is regenerative, resources are used efficiently and sustainably, and the waste hierarchy is applied.

European Commission Circular Economy Strategy (2015, 2018, 2020)

In December 2015, the European Commission adopted an ambitious circular economy package including revised legislative proposals on waste to stimulate Europe's transition to a circular economy.

The Circular Economy Package consists of an EU Action Plan for the circular economy that establishes a programme of actions, with measures covering the whole cycle from production and consumption to waste management and the market for secondary raw materials. The proposed actions will contribute to "closing the loop" of product lifecycles through greater recycling and re-use.

The circular economy is a fundamental alterative to the take-make-consume-dispose linear economic model that still predominates. Legislative tools are among the measures developed.

Under the 2008/98/EC Waste Framework Directive (now amended), construction and demolition waste is a priority waste stream. It set the following objectives:

- By 2020, the preparing for re-use, recycling and other material recovery of non-hazardous construction and demolition waste (excluding naturally occurring material defined in category 17 05 04 in the list of waste) shall be increased to a minimum of 70 % by weight;

- Promote selective demolition to enable removal and safe handling of hazardous substances and facilitate re-use and high-quality recycling by selective removal of materials and establishing sorting systems.
- Reduce waste generation.

The 2018/851 amending Directive on Waste notes the following with regards to Construction and Demolition (C&D) waste:

- Encourage the reuse of products and the setting up of systems promoting repair and re-use activities, including in particular for electronic and electrical equipment, textiles and furniture as well as packaging and construction materials and products;
- Reduce waste generation on processes related to industrial production, extraction of minerals, manufacturing, construction and demolition, taking into account best available techniques;
- Member States shall take measures to promote selective demolition in order to enable removal and safe handling of hazardous substances and facilitate re-use and high-quality recycling by selective removal of materials, and to ensure the establishment of sorting systems for construction and demolition waste at least for wood, mineral fractions, metal, glass, plastic and plaster;
- By 31 December 2024, the Commission shall consider the setting of preparing for reuse and recycling targets for construction and demolition waste and its material specific fractions.

3.2 National Context

A Waste Action Plan for a Circular Economy, Ireland's National Waste Policy 2020 -2025 published in September 2020 by the Department of Environment, Climate and Communications recognises that traditional waste policy focussed on how waste produced is treated and how to achieve the right
balance between waste recycling, recovery and disposal. However, according to the Plan, the focus must now be broadened to encompass how resources and materials are consumed, how products are designed, how to extend the productive life of products and how we prevent waste generation and resource consumption.

The Waste Action Plan notes that from a broader circular economy perspective, it is important that "prevention and reuse is hardwired into construction activity."

According to the latest EPA figures, 8.8 million tonnes of C&D waste was generated in 2019 up from 6.2m in 2018 due to increased construction activity.
The recovery rate of non-hazardous, non-soil and stone material in 2019 was 84% up from 77% in 2018.

Approximately 85% of the C&D waste generated was soil, stones and dredged spoil. Only 2% was collected as single waste streams (wood, glass, plastic or metal). 82% of C&D waste was backfilled, 10% went to disposal and only 7% was recycled. This mirrors the trends noted by the EEA.

3.3 Regional & Local Context

The Project is located in the Local Authority area of South Dublin County Council (SDCC).

The Eastern-Midlands Region Waste Management Plan 2015 – 2021 is the over-arching regional waste management plan for the SDCC area.

The Regional Plan sets out the strategic targets for waste management in the region and sets a specific target for C&D waste of "70% preparing for reuse, recycling and other recovery of construction and demolition waste" (excluding natural soils and stones and hazardous wastes) to be achieved by 2020. This is in line with the target set for Member States under the Waste Framework

Directive 2008/98/EC.

Municipal landfill charges in Ireland are based on the weight of waste disposed. In the Leinster Region, charges are approximately €130 - €150 per tonne of waste which includes a €75 per tonne landfill levy introduced under the Waste Management (Landfill Levy) (Amendment) Regulations 2013.

The SDCC County Development Plan 2022 – 2028 sets out the following relevant policies and objectives in Section 11.6 Waste Management:

Policy IE7: Waste Management

Implement European Union, National and Regional waste and related environmental policy, legislation, guidance and codes of practice to improve management of material resources and wastes.

3.4 RWMP Purpose

The guiding principles for this RWMP mirrors the latest policies to use resources efficiently and to ensure that the waste hierarchy for waste management as indicated in Figure 1 below is adhered to during pre-construction design and during all phases of site development and construction.

Figure 1 Waste Hierarchy for Waste Management (source: European Commission)

Garocal Ltd is committed to fulfilling the requirements of the Guidelines and adhering to the prioritisation of waste prevention and lifecycle thinking.

At a minimum, the preparing for re-use, recycling and other material recovery of non-hazardous construction and demolition waste (excluding naturally occurring material defined in category 17 05 04 in the list of waste) shall be a minimum of 70 % by weight. This target is subject to review pending the publication of any new targets by the EU in 2024 as noted in EU Directive 2018/851 on waste.

Other project specific targets include:

- Waste benchmarks as set out in BREEAM (Building Research Establishment Environmental Assessment Methodology) will be applied for the Project construction phase. A value of ≤13.3 m3 or 11.1 tonnes/100m2 development is applied (excluding soils and stones);
- The amount of natural material (soils and stones) requiring recovery off-site will be minimised.

4 Project Description

4.1 Site Description

The existing site is located to the rear of The Copper Kettle Coffee Shop on Main Street, Rathcoole, Co. Dublin. The site is bounded to the north, east and west by existing residential dwellings and to the south by The Copper Kettle Coffee Shop (see Figure 2 below). The main vehicular site access is via the existing Barrack Court residential estate to the east of the proposed development.

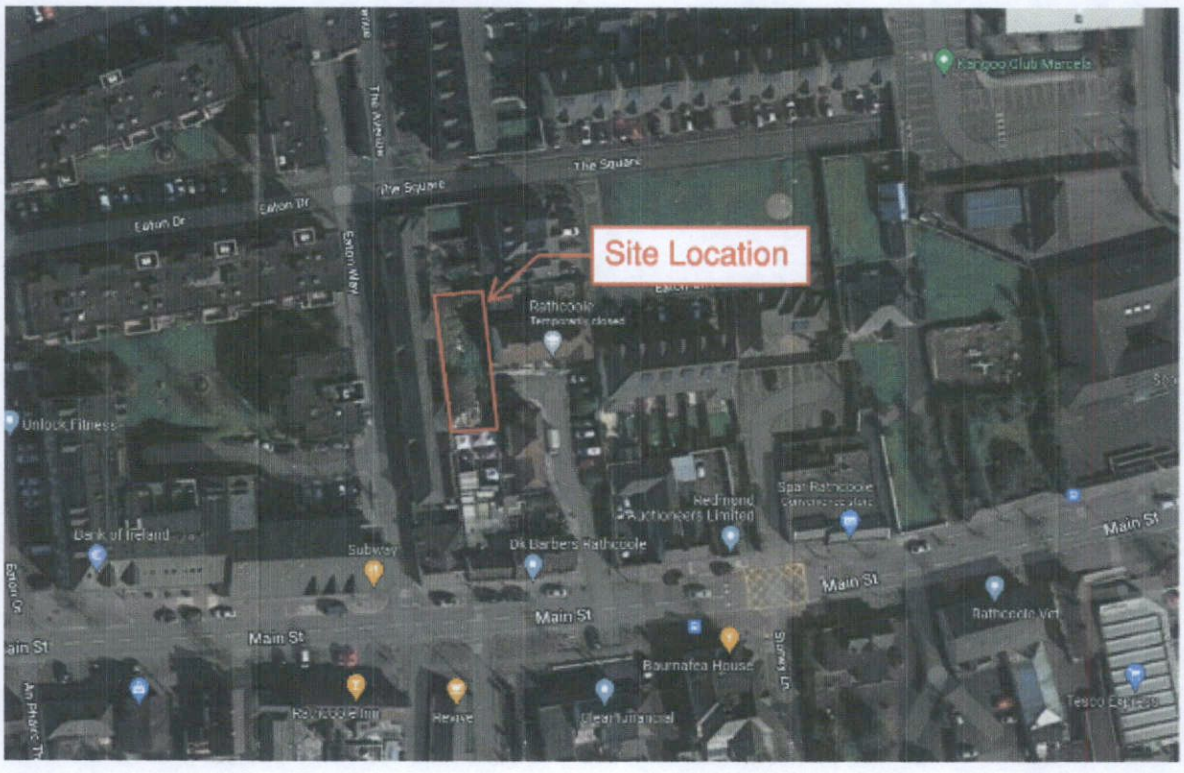

Figure 2 Site Location - Outlined in Red (Source: Google Maps)

4.2 Development Description

The proposed development includes construction of a dwelling serviced by private amenity space to the rear and an on curtilage vehicular parking space accessible via Barrack Court; the provision of 2 replacement vehicular parking spaces for use by residents of Barrack Court; and all ancillary works necessary to facilitate development.

The proposed surface water runoff from the proposed development will discharge to ground via an infiltration trench within the road carriage adjacent to the unit. The suitability of the infiltration trench will be determined through tests on site. A water butt is also proposed to capture rainfall runoff from the roof area of the proposed dwelling.

The proposed wastewater discharge from the development will be via gravity to the public drainage system serving Barrack Court.

A new connection to the existing watermain serving Barrack Court will serve the proposed unit.

The existing access road to Barrack Court will be extended to serve the proposed unit and also to relocate the existing car parking spaces in Barrack Court.

4.3 Main Construction Elements

The site development and construction phases are expected to comprise a single phase of 9 – 12 months in total. The following steps will be completed:

- Site enabling works;
- Foundation;
- Substructure;
- Main structure;
- Fit out;
- Final site development, landscaping;
- Handover.

Construction traffic will access and exit the site via Main Street, Rathcoole arriving via the N7 from the west and the R120 from the east (as noted in the Construction Traffic Management Plan in Section 9).
It is envisaged that 5 – 6 HGVs will access the site per day during peak activities. Based on construction working hours of 08.00 – 18.00 hrs Monday to Friday, this equates to on approximately 1 HGV trip/hr accessing the site. Vehicle parking is available along Main Street, Rathcoole. Storage and welfare facilities will be provided in the site compound.
Estimates of construction material imports to the site will be fully estimated by the contractor as part of updated versions of this outline RWMP.

4.4 Proposed Site Clearance and/or Demolition

Minor demolition works are required to the existing boundary wall being removed to facilitate the new access from Barrack Court to the dwelling.
The following is also noted:

- No existing hazardous material is apparent on the site.
- No asbestos containing material (ACM) are apparent on the site.
- No disturbance or removal of bedrock is required on the site.
- Very little vegetation will be removed.

Approximately 200m^3 of soil will be moved during the project development works. Where possible, this will be retained within the site for landscaping. However, some material may require removal to an inert recovery facility.

5 Roles and Responsibilities

Garocal Ltd will act in the role of client and will also be a key member of the overall Design Team which will also comprise, at a minimum, the Project Architect / Engineer. Other team members will be appointed as the RWMP progresses to construction stage including the Main Contractor.

The named members of the Design Team are as follows:

- Client – Garocal Ltd.
- Project Architect / Engineer – Robert Turley

The Guidelines require that a Resource Manager (RM) be appointed to the Design Team. The RM will be performed by a number of different individuals over the life-cycle of the construction phase of the Project, however it is intended to be a reliable person, with the requisite authority, chosen from within the Planning/Design/Contracting Team, who is technically competent and appropriately trained, who takes the responsibility to ensure that the objectives and measures within the Project RWMP are complied with. The role will include different activities at different stages of the project including conducting waste checks/audits, adopting construction methodology that is designed to facilitate maximum reuse and/or recycling of waste and conducting toolbox talks and awareness training. At pre-construction, the Project Architect / Engineer is nominated to the role of RM to manage the RWMP through the design process. In later stages, the contractor appointed will nominate the RM.

5.1 Client Role

The Client is responsible for establishing the aims and the performance targets relating to resource and waste management.

- The Client has commissioned the preparation and submission of a preliminary RWMP as part of the design and planning submission.
- The Client is to commission the preparation and submission of an updated RWMP as part of the construction tendering process.
- The Client will ensure that the RWMP is agreed on and submitted to the local authority prior to commencement of works on site.
- The Client is to request the end-of-project RWMP from the Contractor.

5.2 Design Team Role

The Design Team is formed of architects, consultants, quantity surveyors and engineers and is responsible for:

- Drafting and maintaining the RWMP through the design, planning and procurement phases of the project.
- Appointing a RM to track and document the design process, inform the Design Team and update the RWMP.
- Ensuring that the design approach follows the principles of the Circular Economy.

- Preparing estimated quantities of all projected waste streams with the support of environmental consultants/scientists. This should include data on waste types and prevention and re-use mechanisms to illustrate the positive circular economy principles applied by the Design Team.
- Before construction commences an inventory of the amounts of materials required will be planned and calculated to prevent waste arising from surplus material brought to site.
- Ensuring that Green Procurement requirements are included in tender documents.
- Handing over of the RWMP to the selected Contractor upon commencement of construction of the development.
- Working with the Contractor as required to meet the performance targets for green procurement, resource efficiency and waste as set out in the RWMP.

5.3 Future Contractor Role

The future construction Contractors, once selected, will be responsible for:

- Updating, implementing and reviewing the RWMP throughout the site development and construction phases (including the management of all suppliers and sub- contractors) as per the requirements of the guidelines.
- Identifying a designated and suitably qualified RM who will be responsible for implementing the RWMP during construction phase.
- Supporting the RM to ensure they have the requisite authority to carry out the role successfully.

Implementing the following typical measures on best practice:

- A "just in time" delivery strategy will be implemented to prevent waste generation by improper storage or weather damage. Deliveries will be arranged to align with project construction stages.
- Protective packaging on delivered materials will be maintained to prevent damage to materials stored on-site. Storage areas will be maintained as weather-proof.
- Reject materials damaged during transit will be returned to the supplier.
- Suppliers will be requested to minimise packaging on goods where it is not required e.g. bricks. Goods, not susceptible to water damage will be sent back to suppliers if excessively packaged. Suppliers will be used who accept returned packaging where possible.
- Works will be carried out in the correct order to minimise the need for remedial actions which could generate waste.
- Materials for reuse within the site will be kept clean and dry.
- Induction training of staff will be completed to improve awareness of the need to prevent waste generation, good waste management practices and the specific measures to be implemented on site.
- Regular tool-box talks will be given to ensure everyone who comes to site knows how to reduce, reuse and recycle. Site photos of correct and incorrect practices will be used to communicate to staff.

- Resource re-use and waste management will be prioritised and brought up at every progress, co-ordination and safety meeting to remind construction workers and to provide feedback on how to improve facilities etc.
- Materials coming onto and off-site will be tracked to constantly review wastage rates. High wastage rates will be highlighted, and preventative action taken.
- Regular waste audits will be conducted to determine why waste has been generated and how it can be prevented for future stages.
- Take-back schemes e.g. provided by material producers such as San Gobain/Gyproc for gypsum will be used to prevent waste.
- A dry mortar silo will be used to prevent concrete waste arising as quality is more assured on site with this method.
- Off-cuts will be re-used where possible.
- Hoarding etc that can be dismantled will be fixed so that they can be re-used on other sites.
- Local registered charities such as Men's Shed will engaged with to determine if off-cuts can be of use.

In addition, as part of standard procedures the contractor will be required to:

- Identify all waste collectors to be engaged to transport each of the resources / wastes off-site.
- Identify all destinations for resources taken off-site. At this juncture, Wilton Scrap Metals (Dolly Skip Hire) have been identified as licensed/permitted waste operators that are likely to provide waste services to the Project. As above, any resource that is legally classified as a 'waste' must only be transported to an authorised waste facility by permitted waste collectors.
- Address end-of-waste and by-product notifications with the EPA where required.
- Clarify any other statutory waste management obligations, which could include on-site processing.
- Maintain full records of all resources (both wastes and other resources) for the duration of the project, and
- Prepare a RWMP Implementation Review Report at project handover.

6 Key Materials, Quantities & Costs

The project specific targets for efficient resource usage, waste prevention, re-use, recycling and recovery are set out earlier in Section 3.4 of this document e.g. at a minimum 70% of waste materials will be diverted from landfill.

Taking account of these targets or KPIs, an estimated resource and waste inventory in line with the template provided in Appendix D of the 2021 Guidelines is provided. The following is included:

- Identification of each waste stream generated;
- The List of Waste (LoW) Code for each stream;
- The predicted quantity of material generated (in tonnes);
- The identified resource management route from prevention, re-use of resources and recycling, energy recovery, back-filling or other recovery and disposal for each waste material;
- The estimated cost of resource management.

6.1 Predicted Waste Generation

The typical breakdown of construction waste collected from Irish sites, taken from the EPA website is based on 2019 (latest) figures as presented in Figure 3 below:

Waste Types	**%**
Soil, stones and dredging spoil	84.8
Metals	2.2
Concrete, bricks, tiles and gypsum	6.9
Segregated wood, glass and plastic	0.3
Bitumous mixtures	1.3
Mixed C&D waste	4.5
Total	**100**

Figure 3 Breakdown of construction waste (Source: EPA website)

Excluding soils, stones and dredging spoil, the breakdown of the remaining waste is presented in Figure 4 below:

Waste Types	**%**
Mixed C&D	29.62
Bitumous mixtures	8.55
Segregated wood, glass and plastic	1.97
Metals	14.47
Concrete, brick tiles and gypsum	45.39
Total	**100**

Figure 4 Breakdown of construction waste excluding soil and stone

Waste arisings have been calculated based on waste benchmarks set out in BREEAM (Building Research Establishment Environmental Assessment Methodology) for the Project construction phase. A value of ≤13.3 m3 or 11.1 tonnes/100m2 (gross internal floor area) development was applied (excluding soils and stones) as a Key Performance Indicator (KPI) for the Project. The total gross internal floor area is 116m2. Therefore, the total construction waste expected to be generated (excluding soils and stones) based on 11.1 tonnes/100m2 is 12.86 tonnes split out as shown in Figure 5:

Waste Types	%	Amount predicted (tonnes)
Mixed C&D	29.60	3.81
Bitumous mixtures	8.55	1.10
Segregated wood, glass and plastic	1.97	0.25
Metals	14.47	1.86
Concrete, brick tiles and gypsum	45.39	5.84
Total	**100**	12.86

Figure 5 Predicted Site Specific Waste Generated

Each waste stream indicated above in Figure 5 is then split out into predicted re-use/recycle/ backfill/disposal rates and quantities using the EPA 2019 % rates as presented in Figure 5. The template provided in Appendix D of the 2021 Guidelines is completed in Figure 6 overleaf.

This will form the baseline from which improvements will be measured and recorded throughout the project. At a minimum, waste generation shall not exceed these figures. The template in Figure 6 overleaf will be completed regularly and updated throughout the project by the Resource Manager to ensure target(s) are met and recorded.

LoW Code	Description	Volume Generated (tonnes)	Prevention (tonnes) non-waste	Re-used (tonnes) non-waste	Recycled (tonnes) (waste)	Recovered** (tonnes) (waste)	Disposed (tonnes) (waste)	Unit cost rate (€ per tonne)	Total cost (€)
17 01 01	Concrete	1.46	-	-	0.657	0.760	0.043	40-45	65.70
17 01 02	Bricks	1.46	-	-	0.657	0.760	0.043	40-45	65.70
17 01 03	Tiles and Ceramics	1.46	-	-	0.657	0.760	0.043	40-45	65.70
17 02 01	Wood	0.083	-	-	0.041	0.041	-	90	7.50
17 02 02	Glass	0.083	-	-	0.041	0.041	-	110	9.20
17 02 03	Plastic	0.083	-	-	0.041	0.041	-	125	10.50
17 03 02	Bitumous Mixtures	1.10	-	-	0.70	0.40	-	125	137.50
17 04 01	Copper, bronze, brass	0	-	-	-	-	-	-	-
17 04 02	Aluminium	0	-	-	-	-	-	-	-
17 04 03	Lead	0	-	-	-	-	-	-	-
17 04 04	Zinc	0	-	-	-	-	-	-	-
17 04 05	Iron and Steel	0	-	-	-	-	-	-	-
17 04 06	Tin	0	-	-	-	-	-	-	-
17 04 07	Mixed Metals	1.86	-	-	11.86	-	-	Fluctuates daily Rebate offered. Est. 45	83.70
17 04 11	Cables	0	-	-	-	-	-	-	-
17 05 04	Soils and Stone	200	-	16	-	-	184	45	8,280.00
17 06 04	Insulation Material	0	-	-	-	-	-	-	-
17 08 02	Gypsum	1.46	-	-	0.657	0.760	0.043	40-45	1.95
17 09 04	Mixed C&D waste	3.81	-	-	0.47	2.25	1.09	125	476.25
17 01 06*	Mixtures of, or separate fractions of, concrete, bricks, tiles or ceramics containing hazardous substances	0	-	-	-	-	-	-	-
17 02 04*	Glass, plastic and wood containing or contaminated with hazardous substances	0	-	-	-	-	-	-	-
17 03 01*	Bituminous mixtures containing coal tar	0	-	-	-	-	-	-	-
17 04 09*	Metal wastes contaminated with hazardous substances	0	-	-	-	-	-	-	-
17 05 03*	Soil and stones containing hazardous substances	0	-	-	-	-	-	-	-
17 06 05*	Construction materials containing asbestos	0	-	-	-	-	-	-	-

Figure 6 Preliminary Resource & Waste Inventory

7 Site Management & Infrastructure

The following are outline requirements that shall be adopted by the Contractor at construction phase:

- As noted under "Roles & Responsibilities" a specified RM shall be appointed by the Contractor during construction stage.
- Resource efficient supply chains shall be implemented. Put simply, the involves "doing more, with less" and is a cost-effective measure that is implemented at all project stages from planning to construction. At construction stage, this can involve swapping out virgin materials for recycled materials, reduced packaging on incoming goods, and using waste segregation for high quality recovery rates.
- The RWMP shall be outlined at the induction training for all employees and sub-contactors.
- The induction training of staff will be completed to improve awareness of:
    - The need for efficient use of resources,
    - Prevention of waste generation,
    - Good waste management practices, and,
    - The specific measures to be implemented on site regarding re-use, segregation and maintaining the correct conditions to facilitate this.
- Regular tool-box talks will be given to ensure everyone who comes to site knows how to reduce, reuse and recycle. Site photos of correct and incorrect practices will be used to communicate to staff.
- Resource re-use and waste management will be prioritised and brought up at every progress, co-ordination and safety meeting to remind construction workers and to provide feedback on how to improve facilities etc.
- Adequate waste segregation bins will be installed to prevent mixing of wastes. C&D mixed waste will be avoided. These will be located close to working areas to ensure that workers have the infrastructure to achieve the objectives of reduce, re-use and recycle.
- The preference is to fully implement on-site waste segregation as disposal of mixed waste off-site is the most expensive option. However, the applicant will appoint a waste contractor who can provide off-site segregation of mixed wastes for onward recycling/recovery should any inadvertant mixing occur.
- Materials for off-site recycling will be kept clean and dry.

8 Audits & Inspections

The Resource Manager (RM) shall be responsible for carrying out waste audits and inspections.

At a minimum, daily housekeeping checks of waste infrastructure will be made and recorded. Unusual activities such as high levels of waste generation will be monitored. Where an incident occurs, corrective and preventative action will be taken immediately.

Regular audits will be conducted covering:

- Resource/waste re-use, recycling and recovery records;
- Construction workers awareness and training;
- Review of waste contractors and hauliers permits and licenses etc.
- Initiatives for resource efficiency implemented.

A record of each audit shall be maintained with corresponding details of non-compliances and preventative and corrective actions assigned where necessary.

9 Construction Traffic Management Plan (CTMP)

9.1 Construction Traffic Management Plan

An outline Construction Traffic Management Plan (CTMP), as noted in Item 4 of the SDCC RFI has been prepared and is included in the following section.

This section sets out a framework for a CTMP that will be put in place to support the construction of the proposed development at The Copper Kettle, Main Street, Rathcoole.

The CTMP will be finalised by the main contractor (once appointed), who will confirm the programme of works, the agreed routes to Site, and details of a Resource Manager (RM) who will have responsibilities for managing traffic, and mitigating transport impacts, during construction.

9.2 Construction Programme

Subject to securing the necessary consents, the construction phase is anticipated to commence in 2023 Q2, and to take place over a 6 – 9 month period.

9.3 Construction Compound

5.3.1 The construction compound will be located within the proposed site, and will be securely gated when not in use.

5.3.2 It will provide sufficient space for the laydown of materials, and the storage of machinery and tools. Staff welfare facilities will also be located within the compound;

5.3.3 Parking for construction staff vehicles will be available in the compound;

5.3.4 A set down area for deliveries is available on the public road adjacent to the development;

5.3.5 Materials to be stored on site will be stored in a safe manner and will minimise the risk of any negative environmental effects and will be managed on a 'just-in-time' basis. Temporary toilets and wash facilities will be provided for construction workers which may require periodic waste pumping and waste offsite haulage and shall be carried out by an authorised sanitary waste contractor. An indicative location of the contractors compound is included in Figure 7 below.

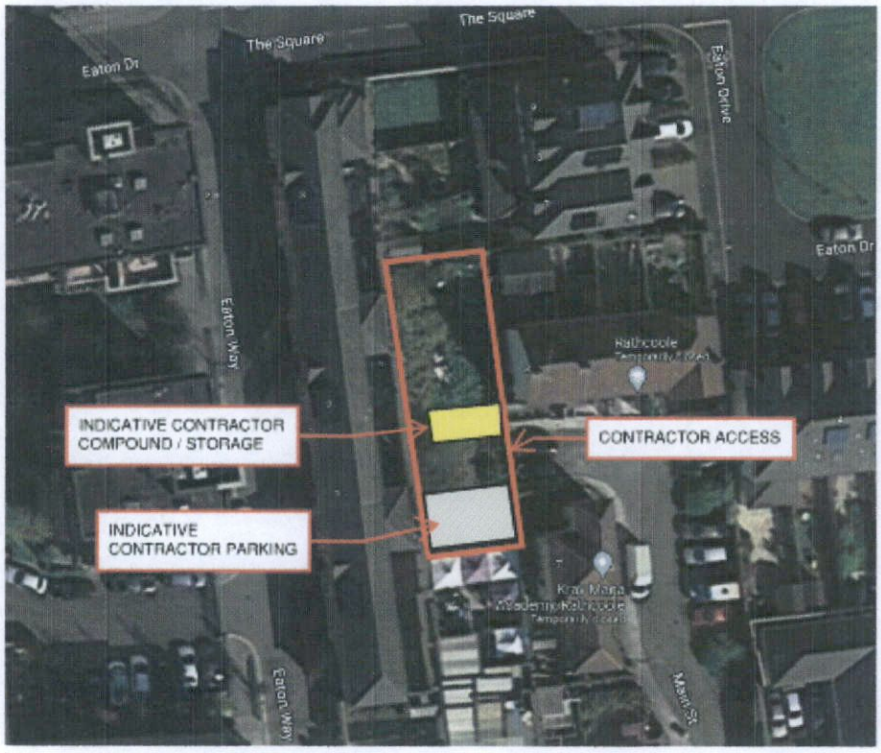

Figure 7 Indicative Contractor Compound

9.4 Site Working Hours

Construction site working hours are expected to be between:

- 08:00 to 18:00 Monday to Fridays; and
- 08:00 to 14:00 on Saturdays.

No work will be undertaken on Sundays or Bank Holidays. On typical weekdays, Staff will be expected to arrive ready to start on site by 08:00 and will typically depart between 15:00 and 18:00.

9.5 Construction Traffic Generation

5.5.1 During the peak of the construction phase there are expected to be around 5 – 6 HGV deliveries per day with between 5 – 10 persons on site. Peak staff vehicle movements (assuming an average car occupancy of 2) are therefore expected to be in the region of 3 – 4 inbound trips in the AM period, and 3 – 4 outbound trips in the PM period.

5.5.2 There are not expected to be any abnormal loads generated by the development.

9.6 Construction Route

The proposed construction routes for HGV traffic are shown on **Figure 8** below.

Figure 4 Proposed Construction Traffic Route

The following routes are proposed:

- To / from the N7 to the east (red route);
- To / from the N7 to the west (magenta route);

It is expected that most HGV deliveries will arrive from the N7 west route and head to the east.

9.7 Measures to Minimise and Mitigate Construction Traffic Impacts

There are a number of traffic management measures which can be implemented to reduce the impact of HGVs. These measures are described below.

Minimise the Volume of Imported and Exported Material

In order to minimise the volume of imported and exported material it is anticipated that a proportion of materials (stone, topsoil etc.) would be sourced/re-used from within the boundaries of the Proposed Development site.

Delivery Control

The appointed contractor will be required to plan and manage deliveries and collections from the site to minimise the impact on the surrounding road network, and to minimise the impact on the local community, particularly in the adjacent Barrack Court development.

The contractor will ensure the following measures during the construction period:

- Delivery of materials will not be within the morning and evening road network peaks, and will avoid the times that children are travelling to school, in so far as is possible;

- The number of delivery trips will be minimised through a combination of consolidated ordering, rationalising suppliers, and consolidated deliveries; and
- On-site waste will be minimised through recycling and re-use.

Sustainability

The appointed contractor will have a high regard to sustainability. The above Resource Waste Management Plan will be updated by the Contractor ahead of construction starting on site.

In particular the following objectives will be put in place:

- Minimisation of vehicle movements to / from the site;
- Promotion of shared transport arrangements for site operatives;
- Thorough pre-planning of operations on-site to optimise the redistribution of earthworks materials together with minimisation of haul distances;
- Reduction in the amount of aggregates used on-site by means of alternative construction techniques;
- Application of a reduce-reuse-recycle philosophy to all waste processing activities; and
- Conforming to construction / building codes of practice in relation to sustainability objectives and waste disposal procedures.

Wheel Washing

Main Street will be regularly swept by a road sweeping vehicle to ensure that it is kept free of dust and dirt.

Speed Limit

It is proposed to impose an additional contractor speed limit of 30km/h on Main Street.

Local residents will be able to report any instances of speeding, or dangerous driving to an appointed site representative who will take necessary action to prevent a repeated incident.

Signage

Temporary construction signage will be erected along Main Street to warn drivers, cyclists, pedestrians of construction activities, and to provide directions to site traffic. The signage will also notify construction traffic of the 30km/h speed limits that is in place.

Signage will be in accordance with the Department for Transport, Tourism and Sport's (DTTAS) Traffic Signs Manual. The exact nature and location of the signage will be confirmed with SDCC.

Staff Induction & Code of Conduct

All site staff, and delivery drivers, will be informed about traffic management arrangements and procedures via site induction packs.

Transportation of materials to and from the site should be conducted by HGV vehicles operated by drivers with an in-date Driver Certificate of Professional Competence (CPC) qualification.

In addition to the Driver CPC qualification, regular 'in-house' coaching will be provided to ensure drivers maintain best practice when operating HGVs.

Drivers will be fully inducted and enrolled into a code of conduct which outlines how driving duties should be undertaken. The driver's code of conduct should include guidance on the following:

- Construction routes;
- Required license categories;
- General vehicle operation and highway code;
- Drivers working hours / fatigue management;
- Breakdowns / RTC / Emergencies;
- Use of electronic devices;
- Drug and Alcohol policy; and
- Behavioural expectations.

The items listed above are not exhaustive and are only indicative of the elements that should be included in the driver's code of conduct document.

Contracts and Emergency Procedures

The main contractor will be responsible for creating a final list of stakeholder contacts and ensuring this list is kept up to date on an on-going basis. Stakeholder contacts would include the roads authority, emergency services, hospitals, local landowners, local businesses, Community Councils, and local residents.

The principal contractor will be responsible for preparing an Emergency Plan for the site. The Emergency Plan will contain information and details of procedures in the event of emergencies. Construction staff would be informed of the Plan and information provided in relation to the location of the nearest hospital, fire assembly points and inclement weather procedures.

Implementation of the CTMP

The implementation of the CTMP will be the responsibility of the appointed principal contractor. Further evolution of the CTMP may be required during the construction period itself.

The main contractor may employ a number of sub-contractors on the Site, and all will fall under the umbrella of the CTMP and will have an obligation to adhere to the CTMP.

A Site Liaison Officer will be identified for the project who will be the key point of contact for the CTMP.

The Liaison Officer will be responsible for the co-ordination of all elements of traffic and transport during the construction process. This person will liaise with the local community so that the community have a direct point of contact within the Developer's organisation who they may contact for information purposes or to discuss matters pertaining to traffic management or site operation.

9.8 Monitoring of the CTMP

The CTMP will be monitored by the Resource Manager who in turn will report to SDCC in relation to any required changes to the CTMP.

We trust that the above reports adequately address the response to the further information request.

Yours Sincerely,

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