



## **Carmanhall Road SHD 2022**

**Resource & Waste Management Plan (RWMP) for Construction & Demolition Waste**

August 2022

**Waterman Moylan Consulting Engineers Limited**

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### Quality Assurance – Approval Status

This document has been prepared and checked in accordance with  
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015)

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<b>Issue</b>	<b>Date</b>	<b>Prepared by</b>	<b>Checked by</b>	<b>Approved by</b>
1	Aug 2022	B McCann	I Worrell	<i>I An Worrell</i>

### Comments

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## Disclaimer

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We disclaim any responsibility to the Client and others in respect of any matters outside the scope of the above.

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# 1. Introduction

## 1.1 Background

This Resource & Waste Management Plan (RWMP) for Construction and Demolition Waste has been prepared by Waterman Moylan on behalf of Atlas GP Limited to accompany an SHD application for a residential development on a brownfield site at the junction of Carmanhall Road and Blackthorn Road, Sandyford, Dublin 18. See Figure 1.

## 1.2 Threshold for Construction Waste Management Plan

The Plan has been prepared in compliance with Section 12.9. of the Dun Laoghaire Rathdown County Development Plan 2022 – 2028 which requires that *'applications for developments of 10+ residential units shall provide a Construction Waste Management Plan.*

## 1.3 Standards

The Plan has been prepared for a Tier-2 project in compliance with *'Best Practice Guidelines for the preparation of Resource & Waste Management Plan for Construction and Demolition Projects'* published by the Environmental Protection Agency, Ireland in 2021.

## 1.4 Guidance for Environmental Design and Management

*Guidance Notes for Environmental Design and Management of Construction Projects* were issued by Dun Laoghaire Rathdown County Council in July 2022. These notes provided guidance on good practice for the preparation of this Plan. In particular, on how the applicants have considered how the design, construction and operation of the proposed development complies with best environmental management practice

## 1.5 Contents of Plan

This Plan is for a Tier 2 Strategic Housing Development project with more than 10 residential units and covers the following phases:

- Design phase including the project conception, preliminary, outline and detailed design phases.
- The statutory planning phase under the Planning and Development Act 2000 (as amended).
- Procurement of contractor services and materials.

This Plan has been prepared during the planning stage prior to construction and will be updated by the Contractor for the Construction Stage of the project.

## 1.6 Structure of Plan

The structure of this plan is set out below:

- 1.0 Background
- 2.0 Project Description
- 3.0 Roles and Responsibilities
- 4.0 Design Approach
- 5.0 Key Materials, Quantities
- 6.0 Site Management
- 7.0 Site Infrastructure



## 2. Project Description

### 2.1 Site Location

The subject site is located at Sandyford in south County Dublin at the junction of Carmanhall Road and Blackthorn Road, Sandyford, Dublin 18. It was formerly occupied by Avid Technology.

The site has an area of 0.73ha (1.82 acre) but for the purpose of encompassing the proposed access junctions, services connections and landscaping, the area within the red line for the planning application has been extended to 0.99 ha (2.48 acre).

The adjoining site to the east at the junction of Carmanhall Road and Ravens Rock Road was formerly occupied by Tack Packaging. It extends to 0.57 ha (1.4 acre).

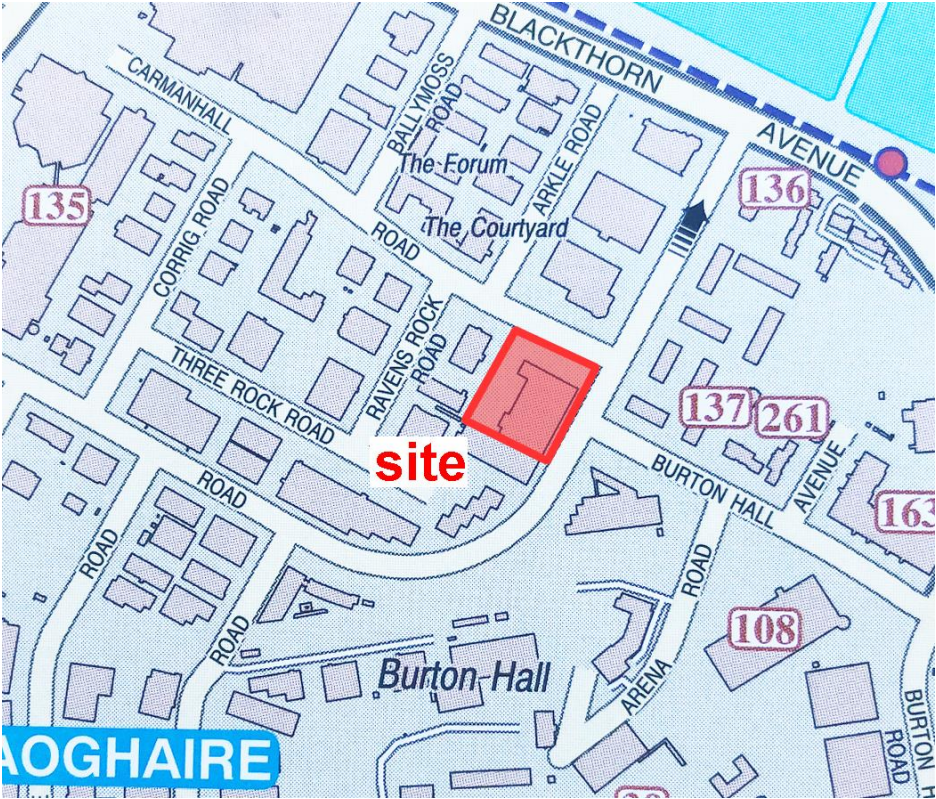


Figure 1 Location Map

### 2.2 Site Description

The site comprises the former Avid Technology site the junction of Carmanhall Road and Blackthorn Road in Sandyford, Co Dublin. The site is currently largely hardstanding and was unoccupied at the time of writing in February 2022.

The site falls from southwest to northeast ranging in level from 86.0mOD in the southwest to 84.0 mOD in the northeast. The existing access to the site is from Carmanhall Road.



### 2.3 Construction Program

At the time of writing in August 2022, it is likely that construction of the proposed development could commence in 2023 for completion in 2026.

### 2.4 Scale of Development

The proposed development will comprise some 334 Build-to-Rent residential units on the former Avid Technology site. See Figure 2.

Car parking with a total of 125 car spaces will be provided at Lower Ground and Basement. Cycle parking with 447 spaces will be provided at Lower Ground Level. Access is proposed from Carmanhall Road and egress to Blackthorn Road. The public realm around the site will incorporate an upgrade of the pedestrian and cycle environment.

The development includes all associated infrastructure to service the development including access junctions, footpaths and cycle paths together with a network of watermains, foul water drains and surface water drains.

A concurrent development with its own Construction Management Plan is also expected to be developed on the former Tack Packaging site to the west. It will comprise 207 Build-to-Rent residential units and 79 car parking spaces at Lower Ground Level and Basement. Access will be from Ravens Rock Road and egress onto Carmanhall Road. See Figure 2.

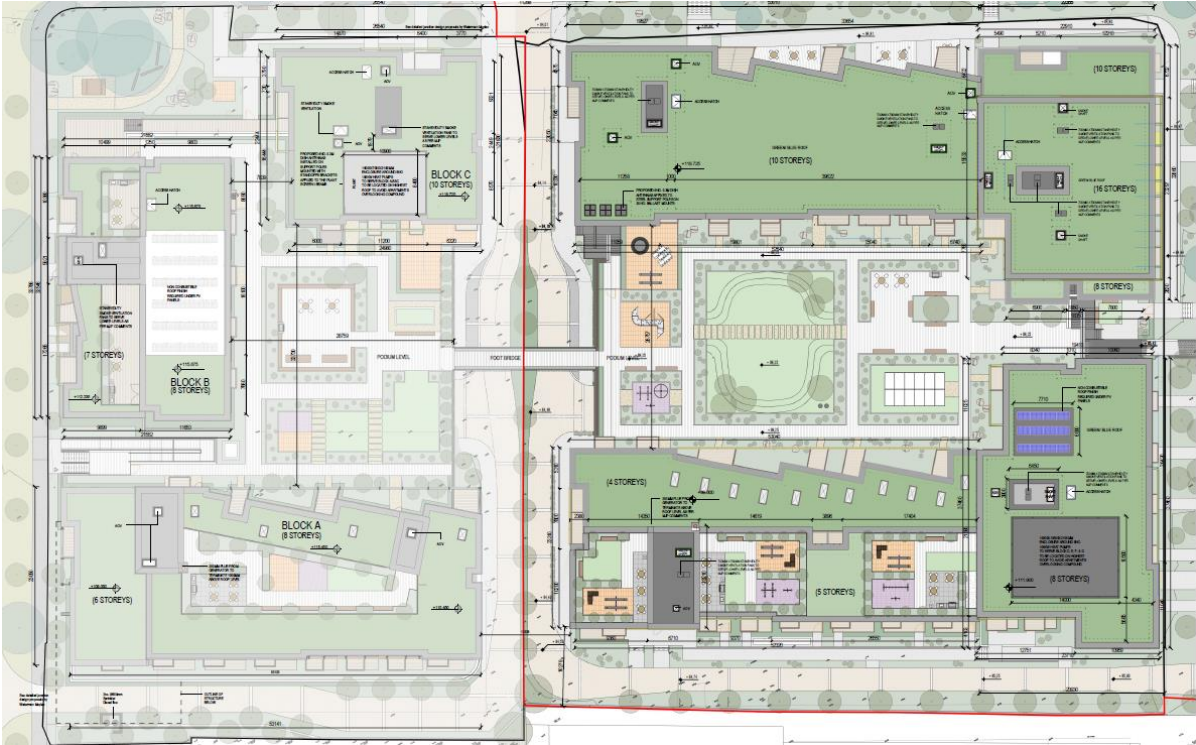


Figure 2 Proposed Site Layout

## 2.5 Non-Hazardous Wastes Arising

The non-hazardous waste which could arise on site during the course of the construction stage of this development includes

- Soil and Topsoil
- Bedrock (Located at 9 – 11m BGL)
- Inert Waste including Concrete, Blocks and Bricks
- Metal including Steel, Aluminium and Lead
- Timber
- Plastic
- Glass
- Plasterboard

In addition, waste will be generated by site staff throughout the construction phase. This waste will encompass general refuse, mixed dry recyclables, food wastes and wastes from any onsite portaloos.

## 2.6 Potentially Hazardous Wastes Arising

The potentially hazardous waste which could arise on site during the course of the construction stage of this development includes:

- Contaminated Soil – we would note no contaminated soils were identified as part of the site investigations undertaken by AECOM (2020) on the subject site
- Chemicals including Solvents
- Fuel / Oil / Waste Oil
- Batteries
- Asbestos– we would note no asbestos containing material (other than the live asbestos cement watermain) were identified as part of the site investigations undertaken by AECOM (2020) on the subject site
- Electrical and Electronic Equipment including Fluorescent Lamps
- Invasive Plant Species

In addition to the materials listed above, other materials could be identified / classified as hazardous during the construction stage of this project.

### 3. Roles and Responsibilities

#### 3.1 Overview of Client and Advisory Team

Client	:	Atlas GP Limited, Heritage House, 23 St Stephens Green, Dublin 2.
Architect		McCauley Daye O'Connell Architects 11 Merrion Square, Dublin 2:
Landscape Architects		Niall Montgomery + Partners, 33 Rock Road, Williamstown, Blackrock, Co. Dublin
Civil Engineer	:	Waterman Moylan Block S, EastPoint Business Park, Alfie Byrne Road, Dublin 3
Environmental Consultant:		Golder, Town Centre House, Dublin Road, Naas, Co. Kildare,
Waste Consultant		AWN Consulting The Tecpro Building, 17, Clonshaugh Business & Technology Park, Dublin
Quantity Surveyor	:	To be appointed by the Client
Contractor	:	To be appointed by the Client.
Resource Manager	:	To be nominated by the Contractor
Sub-Contractors	:	To be appointed by the Contractor

## 3.2 Client

The Client is will finance the project and is responsible for the following:-

- Establishing the ambition and the performance targets for the project.
- Setting out these commitments and targets in relation to prevention and minimisation in the project brief, tender documentation including pre-qualification requirements, invitation to tender, etc.
- Requiring the preparation and submission of an RWMP as part of the design and planning submission, even if not requested by the planning authority for planning.
- Requiring the preparation and submission of an updated RWMP as part of the construction tendering process.
- Ensuring that the RWMP is agreed and submitted to the local authority prior to commencement of works on site; and
- Requesting the end-of-project RWMP from the Contractor

## 3.3 Design Team

The Client Advisory Team (engineers, architects, consultants, etc) has been procured by the Client and is responsible for the following:

- Drafting and maintaining the RWMP through the design, planning and procurement phases of the project.
- Appointing a Resource Manager (RM) to track and document the design process, inform the Design Team and prepare the RWMP.
- Including details and estimated quantities of all projected waste streams. This should also include data on waste types (e.g. waste characterisation data, contaminated land assessments, site investigation information) and prevention mechanisms (such as by-products) to illustrate the positive circular economy principles applied by the Design Team.
- Incorporating relevant conditions imposed in the planning permission into the RWMP.
- Handover of the RWMP to the Contractor at commencement of construction for the development of the RWMP in a similar fashion to how the safety file is handed over to the Contractor.
- Working with the Contractor as required to meet the performance targets for the project.

## 3.4 Local Authority

The Local Authority (or An Bord Pleanála) as the planning regulator is responsible for the following tasks: ●

- Ensuring that the requirement for an RWMP for C&D Projects (as specified in these guidelines) is required for all planning applications (through setting this requirement as an objective of the County Development Plan or local planning policy) for development where construction or demolition is proposed.

- Ensuring that any RWMP submitted with planning complies with the requirements of these guidelines.
- Setting appropriate planning conditions as required in line with the requirements of Section 34(4)(l) of the Planning and Development Acts, as amended.
- Ongoing enforcement of these conditions through the construction phase.

### **3.5 Contractor**

The principal Contractor to be procured by the Client to undertake the construction operations will be responsible for the following:

- Preparing, implementing and reviewing the RWMP through the Construction Stage (including the management of all suppliers and sub-contractors) as per the requirements of the RWMP Guidelines.
- Identifying a designated and suitably qualified Resource Manager (RM) who will be responsible for implementing the RWMP.
- Identifying all hauliers to be engaged to transport each of the resources / wastes off-site. Note that any resource that is legally a 'waste' must only be transported by a haulier with a valid Waste Collection Permit.
- Identifying all destinations for resources taken off-site. As above, any resource that is legally a 'waste' must only be transported to an authorised waste facility.
- Addressing end-of-waste and by-product notifications with the EPA as required.
- Clarification of any other statutory waste management obligations, which could include on-site processing.
- Maintaining full records of all resources (both wastes and other resources) for the duration of the project.
- Preparing a RWMP Implementation Review Report at project handover.

## 4. Design Approach

### 4.1 Design Workshops

At the time of writing in August 2022, the project is at the planning stage with an SHD application programmed to be lodged with An Bord Pleanála in August 2022. Discussions have been held among the design team in relation to the concept, preliminary and outline design phases of the project to establish the location, land use size and appearance of the project for the purposes of preparing a planning application. As part of these workshops, we have identified a design approach that minimises waste through design. No workshops have been held in relation to the detailed design phase which is not expected to commence before receipt of planning permission.

### 4.2 Reuse and Recycling

Prior to the preparation of this Plan, it was decided by the Client that

- (a) The existing brownfield site should be adapted for reuse.
- (b) There are no existing buildings on the site that could be directly adapted, reused or refurbished in whole or in part to meet the Clients requirements.
- (d) There are no existing buildings on the site for use as site accommodation, welfare facilities and / or materials storage during the Construction Stage.
- (e) Further consideration of re-use and recycling will be incorporated in the detailed design phase which is not expected to commence until after completion of the planning stage.

### 4.3 Key Performance Indicators

The project specific targets set by the Client to be used as Key Performance Indicators (KPIs) for this project are set out in Table 1.

Table 1 Project Specific Targets

Indicator	Target
Weight (tonnes) or Volume (cum) of waste generated per construction value	See note below
Weight (tonnes) or Volume of waste generated per construction floor area (sqm)	
Fraction of resource used on site	
Fraction of resource notified as by-product	
Fraction of resource used which was recycled material	
Fraction of waste generated at source before being sent off -site for recycling / recovery	
Fraction of waste recovered, fraction of waste recycled, or fraction of waste disposed	

Note: In the absence of historical data from a similar completed project, it has not been possible to set performance targets in this edition of the RWMP.

#### **4.4 Green Procurement**

During the detailed design and pre-tender phases, tender specifications, selection and award criteria, and contract conditions will be drafted with the objective of procuring products and services that will prevent and reduce waste. The detailed design and pre-tender phase are not expected to commence until after completion of the planning stage.

#### **4.5 Off-Site Construction**

Consideration of off-site construction will be incorporated in the detailed design phase which is not expected to commence until after completion of the planning stage.

#### **4.6 Materials Optimisation**

Consideration of materials optimisation will be incorporated in the detailed design phase which is not expected to commence until after completion of the planning stage.

#### **4.7 Flexibility and Deconstruction**

Consideration of flexibility and de-construction will be incorporated in the detailed design phase which is not expected to commence until after completion of the planning stage.



## **5. Key Materials, Quantities**

### **5.1 Residual Resource Stream**

Each residual resource stream predicted will be identified and described during the detailed design phase and updated by the Resource Manager during the Construction Stage.

### **5.2 List of Waste (LoW) Codes**

A list of the appropriate waste codes will be included in the Resource Inventory to be prepared during the detailed design phase and updated by the Resource Manager during the Construction Stage.

### **5.3 Predicted Quantity of Material**

The predicted quantity of materials (in tonnes) will be estimated by the Quantity Surveyor during the detailed design phase during the detailed design phase and updated by the Resource Manager during the Construction Stage.

### **5.4 Resource Management Routes**

The identified resource management options from prevention, reuse, recycling, recovery and disposal for each material will be identified during the detailed design phase and updated by the Resource Manager during the Construction Stage.

### **5.5 Cost of Resource Management**

The estimated cost of resource management will be prepared by the Quantity Surveyor during the detailed design phase and updated by the Resource Manager during the Construction Stage.

## **6. Site Management**

### **6.1 Resource Manager**

A suitably qualified Resource Manager will be nominated by the contractor at the commencement of the Construction Stage.

### **6.2 Site Induction Training**

All training and induction in relation to resource management will be delivered by the Resource Manager.

### **6.3 Tool Box Talks**

The Resource Manager will be responsible for the provision of toolbox talks on resource management on a continuous basis.

### **6.4 Waste Collection Operators**

The Resource Manager will be responsible for ensuring that all residual resources legally classified as 'waste' moved off-site including soil and stone must be collected by authorised waste collectors.

### **6.5 Waste Collection Sites**

The Resource Manager will be responsible for ensuring that all residual resources legally classified as 'waste' taken from site must be sent to suitably authorised waste facilities for disposal or recover.

### **6.6 Supply Chains**

The Resource Manager will engage with a team or individuals tasked with the procurement of materials and services to ensure best practice procedures are employed to prevent residual resources at the site.

### **6.7 Record Keeping – Off-Site Export**

Site records for waste and resources exported off-site will be maintained by the Resource Manager.

### **6.8 Record Keeping– On-Site Resource Uses**

Site records for on-site resource uses will be maintained by the Resource Manager.

### **6.9 Reporting**

The Resource Manager will be responsible for internal reporting of resource statistics to the Client and Contractor management.

On completion of construction, the Resource Manager will prepare a final report summarising the outcome of the resource management processes adopted, the total reuse and recovery figures and the final destination of all resources taken off-site.

## **6.10 Communications**

Communication tasks to be carried out by the Resource Manager will include internal reporting, engaging with the relevant local authority, engaging with other stakeholders and preparing the final report.

## **6.11 Audits and Inspections**

The Resource Manager will be responsible for periodic audits and inspection of work practices, reviewing all records of waste and resources generated on-site or transported off-site and comparison of resource records with established targets.

## **7. Site Infrastructure**

### **7.1 Site Signage**

For the duration of the Construction Stage, labelling is adequate to provide information to assist good resource practice across the site.

### **7.2 Resource Storage**

For the duration of the Construction Stage, the Resource Manager will be responsible for ensuring that the proposed Waste Storage Areas (WSAs) have adequate space for storage and handling.

### **7.3 Handling and Export of Resources**

For the duration of the Construction Stage, the Resource Manager will be responsible for the on-site handling and export of resources in compliance with the Guidelines.

# UK and Ireland Office Locations

