

# Environmental Impact Statement

**Redevelopment of Hal Ferh**

PA/04906/10

Volume Three  
**Coordinated Assessment Report  
Waste Analyses**

Construction Waste  
Operations Waste

**Construction Waste**  
Operations Waste

Waste Type	EWC	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 13 02: Waste engine, gear and lubricating oils</b>						
Waste oil generated by the HGVs required for the transport of demolition waste out of the site	13 02 04 or 13 02 05 or 13 02 06 to be established once a contractor is appointed	H	Depends on age, type, and condition of vehicles and equipment used <20 L per week	Lubricating oil is insoluble, persistent and can contain toxic chemicals and heavy metals It is slow to degrade It sticks to everything from beach sand to bird feathers If not managed well it can contaminate waterways and pollute drinking water	On-site servicing shall be limited to equipment stationed on the site e.g. (air compressors and mortar mixers) During construction works, on-site servicing shall be minimal. On-site servicing should take place within a bund .	To be stored in waste oils well. The oil well should preferably include an inbuilt bund. The materials can be transported to the Developer's Plant immediately after on-site servicing, to be stored in a waste oil well until collection as below. To be collected by a Registered Waste Carrier, through a Registered Broker. The latter will make the necessary arrangements on behalf of the Developer, for the recycling of the waste.
<b>Category 15 02: Absorbents, filter materials, wiping cloths and protective clothing</b>						
Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances oil filters used in on-site equipment	15 02 02	H	Depends on age, type and condition of vehicles and equipment used	Can be a health hazard if not managed properly	On-site servicing shall be limited to equipment stationed on the site e.g. (air compressors and mortar mixers) During construction works, on-site servicing shall be minimal	To be transported to the Contractor's plant/yard to be stored in a hazardous waste container, the technical specifications of which shall be approved by the MEPA. To be collected by a Registered Waste Carrier, through a Registered Broker. The latter will make the necessary arrangements on behalf of the Developer for the export of the waste.

Waste Type	EWC	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 20 02: Garden and park wastes</b>						
Bio-degradeable waste, namely the cut and uprooted trees and shrubs	02 02 01	N	Not quantified	Dust generated if the uprooting is done carried out diligently.	The removal of trees should be carried out on a species by species basis. In the case of the invasive species it would be essential for their leaves/seeds to be destroyed, say through incineration. The types of indigenous trees that are present on the site do not have a good survival rate in case the transplanting option is considered.	The trunks of the trees should be mulched and used for ground cover in landscaping schemes.

Waste Type	EWC	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 13 02: Waste engine, gear and lubricating oils</b>						
Waste oil generated by the HGVs required for the transport of demolition waste out of the site	13 02 04 or 13 02 05 or 13 02 06 to be established once a contractor is appointed	H	Depends on age, type, and condition of vehicles and equipment used <20 L per week	Lubricating oil is insoluble, persistent and can contain toxic chemicals and heavy metals It is slow to degrade It sticks to everything from beach sand to bird feathers If not managed well it can contaminate waterways and pollute drinking water	On-site servicing shall be limited to equipment stationed on the site e.g. (air compressors and mortar mixers) During construction works, on-site servicing shall be minimal. On-site servicing should take place within a bund .	To be stored in waste oils well. The oil well should preferably include an inbuilt bund. The materials can be transported to the Developer's Plant immediately after on-site servicing, to be stored in a waste oil well until collection as below. To be collected by a Registered Waste Carrier, through a Registered Broker. The latter will make the necessary arrangements on behalf of the Developer, for the recycling of the waste.
<b>Category 15 02: Absorbents, filter materials, wiping cloths and protective clothing</b>						
Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances oil filters used in on-site equipment	15 02 02	H	Depends on age, type and condition of vehicles and equipment used	Can be a health hazard if not managed properly	On-site servicing shall be limited to equipment stationed on the site e.g. (air compressors and mortar mixers) During construction works, on-site servicing shall be minimal	To be transported to the Contractor's plant/yard to be stored in a hazardous waste container, the technical specifications of which shall be approved by the MEPA. To be collected by a Registered Waste Carrier, through a Registered Broker. The latter will make the necessary arrangements on behalf of the Developer for the export of the waste.

Waste Type	EWC	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 17 01: Concrete, bricks, tiles, and ceramics</b>						
Concrete from slabs and screeds	17 01 01	N	10,000 tonnes	Dust emissions during the actual demolition and loading	<p>The part of the building to be demolished should be continuously sprayed with water.</p> <p>The material should be loaded on HGVs shortly after being demolished. In other words no stock piling should be permitted during demolition works.</p> <p>When loaded on HGVs, the material should be covered by means of a heavy duty tarpaulin which would be securely attached to the load boxes.</p>	<p><b>Option 1 (preferred)</b> To be transported to an active hardstone quarry for the separation of concrete and steel reinforcement.</p> <p>The crushed concrete to be used for low grade concrete mixes, and the steel to be exported as scrap through a Registered Waste Broker.</p> <p><b>Option 2</b> To be transported by a Registered Waste Carrier to the inert waste landfill at Ta' Zuta.</p>
Masonry	17 01 02	N	24,000 tonnes	Dust emissions during the actual demolition and loading	<p>The part of the building to be demolished should be continuously sprayed with water.</p> <p>The material should be loaded on HGVs shortly after being demolished. In other words no stock piling should be permitted during demolition works.</p> <p>When loaded on HGVs, the material should be covered by means of a heavy duty tarpaulin which would be securely attached to the load boxes.</p>	<p>Use of masonry blocks for the construction of foundations. The actual amounts will be determined following the detailed design of the project, which is normally done after the issue of development permissions.</p> <p>Estimated maximum to be used would be 10,000 tonnes</p> <p>The remainder shall be transported by a Registered Waste Carrier to the inert waste landfill at Ta' Zuta.</p>

Waste Type	EWC	Non-hazardous	Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
Terrazzo tiles	17 01 03	N		360 tonnes	Dust emissions during the actual demolition and loading	<p>The part of the building to be demolished should be continuously sprayed with water.</p> <p>The material should be loaded on HGVs shortly after being demolished. In other words no stock piling should be permitted during demolition works.</p> <p>When loaded on HGVs, the material should be covered by means of a heavy duty tarpaulin which would be securely attached to the load boxes.</p>	<p><b>Option 1 (preferred)</b> To be transported to an active hardstone quarry for crushing and use in low grade concrete mixes</p> <p><b>Option 2</b> To be transported by a Registered Waste Carrier to the inert waste landfill at Ta' Zuta.</p>
Ceramic tiles and ceramic fittings	17 01 07	N		300 tonnes		As above	To be transported by a Registered Waste Carrier to the inert waste landfill at Ta' Zuta
<b>Category 17 02: Wood, glass and plastics</b>							
Wood from apertures	17 02 01	N		5 tonnes	This material can be dangerous to handle	Will be packed into small skips before being loaded on HGVs for transportation	The Registered Waste Broker will make arrangements, on behalf of the Developer, for the transport of this material to the Sant' Antnin waste facility for recycling
Glass from apertures	17 02 02	N		10 tonnes	This material can be dangerous to handle	Will be packed into small skips before being loaded on HGVs for transportation	The Registered Waste Broker will make arrangements, on behalf of the Developer, for the transport of this material to the Sant' Antnin waste facility for recycling
Recently installed PVC conduits	17 02 03	N		<5 tonnes			The Registered Waste Broker will make arrangements, on behalf of the Developer, for the transport of this material to the Sant' Antnin waste facility for recycling

Waste Type	EWC	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 17 03: Bituminous mixtures, coal tar</b>						
Roof membrane	17 03 02	H	5 tonnes	When liquid this material is hazardous but when cured it is safe to handle	To be deposited for temporary storage in sealable containers	The Registered Waste Broker will make arrangements for this material to be collected for export
<b>Category 17 04: Metals and alloys</b>						
Aluminium from apertures	17 04 02	N	<5 tonnes			The Registered Waste Broker shall make arrangements, on behalf of the Developer, for the export of the material as scrap.
Steel reinforcement separated from concrete	17 04 05	N	300 tonnes	Refer to the row concerned with 17 01 01 Option 1.	Refer to the row concerned with 17 01 01 Option 1	Refer to the row concerned with 17 01 01 Option 1.
Steel from apertures	17 04 05	N	<50 tonnes			The Registered Waste Broker shall make arrangements, on behalf of the Developer, for the export of the material as scrap.
Steel from original conduits	17 04 05	N	<15 tonnes			The Registered Waste Broker shall make arrangements, on behalf of the Developer, for the export of the material as scrap.

Waste Type	EWC	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 20 01: Municipal waste</b>						
Mixed municipal waste Mainly: <ul style="list-style-type: none"> <li>• biodegradable waste from packed lunches</li> <li>• plastic and glass bottles for water and soft drinks</li> </ul>	20 03 01	N	circa 1 tonne 0.6 tonnes per annum per capita for 5 persons over 16 weeks	Time, space, expense, and energy needed to remove waste from the system If not managed well infestation of vermin and other pests and bad odours may occur	On- site workers shall be provided with waste separation facilities and encouraged to separate waste	Where possible waste should be separated and deposited in the appropriate recycling bins Bins should be covered in a way to prevent infestation of vermin, strays, and other pests The refuse storage facilities should consist of standard covered skips on wheels which are emptied regularly by a registered waste broker, and deposited at the Sant' Anthnin waste facility for treatment and re-cycling

Waste Type	EWC	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 20 02: Garden and park wastes</b>						
Soil and stones (mainly soil) from both the Flal Ferñ and Scouts' sites.	20 02 02	N	Up to 64,000 tonnes	High levels of dust can be produced when extracted material is handled. In the short term, exposure to high levels of dust irritates the nose and throat.	To be sprayed or sprinkled with water (i) on a regular basis during temporary storage and (ii) prior to being transported. When loaded on HGVs, the material should be covered by means of a heavy duty tarpaulin which would be securely attached to the load boxes.	To be transported by a Registered Waste Carrier to a site or sites identified by the Director of Agriculture under the Fertile Soil (Preservation) Act.
<b>Category 01 01: Wastes from mineral extraction</b>						
Coarse slope scree and valley fill layer composed of rock fragments and red-brown clay conglomerate/breccia up to circa 13m thick often partly lithified from both the Flal Ferñ and Scouts' sites.	01 01 02	N	400,000 tonnes	High levels of dust can be produced when extracted material is handled. In the short term, exposure to high levels of dust irritates the nose and throat. May cause silicosis	To be sprayed or sprinkled with water (i) on a regular basis during temporary storage and (ii) prior to being transported. When loaded on HGVs, the material should be covered by means of a heavy duty tarpaulin which would be securely attached to the load boxes.	To be transported by a Registered Waste Carrier to the inert waste landfill at Ta' Zuta. It is possible though that the appointed contractor may consider, through his engineering adviser, the rock fragments as useful for low grade concrete mixes and have the material transported to his plant for separation and use. This possibility can only be realised (if feasible) after the appointment of the excavation contractor.
Moderately strong limestone, identified as the Tal-Pitkal Member of the Upper Coralline Limestone formation. To be extracted from the Flal Ferñ site only	01 01 02	N	40,000 tonnes	High levels of dust can be produced when extracted material is handled. In the short term, exposure to high levels of limestone dust irritates the nose and throat. May cause silicosis	To be used on site for backfilling in areas where relatively strong backfill material is required (say, underneath the underground car park of the	To be sprayed or sprinkled with water on a regular basis during temporary storage and when transported within the site.

Waste Type	EWC	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 13 02: Waste engine, gear and lubricating oils</b>						
Waste oil generated by the HGVs required for the transport of demolition waste out of the site	13 02 04 or 13 02 05 or 13 02 06 to be established once a contractor is appointed	H	Depends on age, type, and condition of vehicles and equipment used <40 L per week	Lubricating oil is insoluble, persistent and can contain toxic chemicals and heavy metals It is slow to degrade It sticks to everything from beach sand to bird feathers If not managed well it can contaminate waterways and pollute drinking water	On-site servicing shall be limited to equipment stationed on the site e.g. (air compressors and mortar mixers) During construction works, on-site servicing shall be minimal. On-site servicing should take place within a bund .	To be stored in waste oils well. The oil well should preferably include an inbuilt bund. The materials can be transported to the Developer's Plant immediately after on-site servicing, to be stored in a waste oil well until collection as below. To be collected by a Registered Waste Carrier, through a Registered Broker. The latter will make the necessary arrangements on behalf of the Developer, for the recycling of the waste thru Waste-Serv Malta Limited
<b>Category 15 02: Absorbents, filter materials, wiping cloths and protective clothing</b>						
Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances oil filters used in on-site equipment	15 02 02	H	Depends on age, type and condition of vehicles and equipment used	Can be a health hazard if not managed properly	On-site servicing shall be limited to equipment stationed on the site e.g. (air compressors and mortar mixers) During construction works, on-site servicing shall be minimal	To be transported to the Contractor's plant/yard to be stored in a hazardous waste container, the technical specifications of which shall be approved by the MEPA. To be collected by a Registered Waste Carrier, through a Registered Broker. The latter will make the necessary arrangements on behalf of the Developer for the export of the waste.

Waste Type	EWC	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 13 05: Oil/water separator contents</b>						
Sludge from vehicle washing recycling chambers	13 05 01	H	Depends on weather conditions	Can be an environmental and health hazard; depending on level of contamination of the sludge by oils and other pollutants	Amount of water used in this operation should be minimised	Sludge accumulated in recycling chambers to be pumped out by means of mobile suction pumps. To be temporarily stored in a bunded area and left to dry. To be collected by a Registered Waste Carrier, through a Registered Broker. The latter will make the necessary arrangements on behalf of the Developer, for the treatment/cleaning of the sludge.
<b>Category 20 01: Municipal waste</b>						
Mixed municipal waste Mainly: <ul style="list-style-type: none"> <li>• biodegradable waste from packed lunches</li> <li>• plastic and glass bottles for water and soft drinks</li> </ul>	20 03 01	N	circa 4 tonnes 0.6 tonnes per annum per capita for 10 persons over 33 weeks	Time, space, expense, and energy needed to remove waste from the system If not managed well infestation of vermin and other pests and bad odours may occur	On-site workers shall be provided with waste separation facilities and encouraged to separate waste	Where possible waste should be separated and deposited in the appropriate recycling bins Bins should be covered in a way to prevent infestation of vermin, strays, and other pests The refuse storage facilities should consist of standard covered skips on wheels which are emptied regularly by a registered waste broker, and deposited at the Sant' Antrin waste facility for treatment and re-cycling

Waste Type	Waste Code as per LN 337/2001	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 08 01: Waste from MFSU and removal of paint and varnish</b>						
Waste paint and varnish containing organic solvents or other dangerous substances	08 01 11	H	<5 tonnes	<ul style="list-style-type: none"> <li>Bio-Hazard</li> <li>Teratogenic</li> <li>Can cause irritations to eyes, skin, and airways.</li> </ul> <p>Water based paints should not be associated with any hazards</p> <p>Oil based paints are associated with skin and eye irritation and allergic skin reactions</p> <p>The other main effect would be from solvent exposure. Rapid signs and symptoms of toxicity are common with exposures to high concentrations of organic solvents</p>	<p>Products with higher environmental and occupational health and safety performance should be given preference.</p> <p>Leftover paints and varnishes can be minimized through detailed scheduling and accurate ordering of materials.</p> <p>The unused paints/varnishes can also be used in other projects.</p> <p>Developer should consider ordering non-hazardous material (e.g. water based paint, 18 01 12), where possible</p>	<p>To be stored together with containers in a sealable hazardous waste container.</p> <p>To be collected by a Registered Waste Carrier, through a Registered Broker. The latter will make the necessary arrangements for the export of the waste.</p>
<b>Category 13 02: Waste engine, gear and lubricating oils</b>						
Engine, gear and lubricating oils used by on-site equipment	13 02 04 or 13 02 05 or 13 02 06 to be established once a contractor is appointed	H	Depends on age, type, and condition of vehicles and equipment used <40 L per week	<p>Lubricating oil is insoluble, persistent and can contain toxic chemicals and heavy metals</p> <p>It is slow to degrade</p> <p>It sticks to everything from beach sand to bird feathers</p> <p>If not managed well it can contaminate waterways and pollute drinking water</p>	<p>On-site servicing shall be limited to equipment stationed on the site e.g. (air compressors and mortar mixers)</p> <p>During construction works, on-site servicing shall be minimal</p>	<p>To be stored in a waste oils well, the technical specifications of which shall be approved by the MEPA. The oil well should preferably include an inbuilt bund.</p> <p>Given the small amounts of waste oils involved, the materials can be transported to the Contractor's plant/yard immediately after on-site servicing, to be stored in a waste oil well until collection as below.</p> <p>To be collected by a Registered Waste Carrier, through a Registered Broker. The latter will make the necessary arrangements on behalf of the Developer, for the recycling of the waste.</p>

Waste Type	Waste Code as per LN 337/2001	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 13 05: Oil/water separator contents</b>						
Sludge from vehicle washing recycling chambers	13 05 01	H	Depends on weather conditions	Can be an environmental and health hazard; depending on level of contamination of the sludge by oils and other pollutants	Amount of water used in this operation should be minimised	Sludge accumulated in recycling chambers to be pumped out by means of mobile suction pumps. To be temporarily stored in a banded area and left to dry. To be collected by a Registered Waste Carrier, through a Registered Broker. The latter will make the necessary arrangements on behalf of the Developer, for the treatment/cleaning of the sludge.

Waste Type	Waste Code as per LN 337/2001	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 15 01: Packaging (including separately collected municipal packaging waste)</b>						
Paper and cardboard packaging from M&E equipment	15 01 01	N	Depends on type of equipment installed	Time, expense, and energy needed to remove waste from the system	To consider procuring products with least amounts of packaging	To be separated and deposited in corresponding on-site skips. Skips should be covered and/or located in a sheltered area in order for the material to be kept dry To be collected by a Registered Waste Carrier, through a Registered Waste Broker, and contracted to the Sant' Antnin waste facility for recycling.
Plastic packaging from M&E equipment	15 01 02	N	Depends on type of equipment installed	Time, expense, and energy needed to remove waste from the system	To consider procuring products with least amounts of packaging	To be separated and deposited in corresponding on-site skips. To be collected by a Registered Waste Carrier, through a Registered Waste Broker, and contracted to the Sant' Antnin waste facility for recycling.
Metallic packaging	15 01 04	N	Refer to row covering 15 01 10, below	Time, expense, and energy needed to remove waste from the system	To consider procuring products with least amounts of packaging Developer should consider ordering non-hazardous material, e.g. water based paints, 18 01 12, where possible	To be separated and deposited in corresponding on-site skips. To be collected by a Registered Waste Carrier, through a Registered Waste Broker, and contracted to the Sant' Antnin waste facility for recycling.

Waste Type	Waste Code as per LN 337/2001	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
Packaging containing residues of or contaminated by dangerous substances	15 01 10	H				
<i>Subdivided into:</i>						
Bags containing cement and cement based mortar mixes	15 01 10	N	Circa 5,000 bags	Time, expense, and energy needed to remove waste from the system High levels of dust can be produced when cement is handled, for example when emptying or disposing of bags. In the short term, exposure to high levels of cement dust irritates the nose and throat. Scabbling or concrete cutting can also produce high levels of dust, which may contain silica	Risk of hazardous substances leaching out of packaging into the soil and reaching ground water and other aquatic environments Waste cement bags to be stored in skips located in protected areas to ensure that they are kept dry	To be separated and deposited in corresponding on-site skips. Skips should be covered by or located in a sheltered area in order for material to be kept dry. In accordance with advice given by WasteServ, to be transported by a Registered Waste Carrier, through a Registered Waste Broker, and consigned at the Sant' Antnin facility. The bags shall be cleaned thoroughly and recycled.
Containers of hazardous paints, varnishes and so on	15 01 10	N	circa 4,000x5L tins	The hazards from paint vary with the type of solvent and pigments used Water based paints should not be associated with any hazards. Oil based paints are associated with skin and eye irritation and allergic skin reactions The other main effect would be from solvent exposure. Rapid signs and symptoms of toxicity are common with exposures to high concentrations of organic solvents	To be handled as per instructions in Materials Safety Data Sheets Developer should consider ordering non-hazardous material, e.g. water based paints, 18 01 12, where possible. The waste containers would thus fall under 15 01 04 Contractors should be encouraged to make use of high capacity containers (e.g. 250L tanks) for paints, where possible. Such tanks are reusable	To be separated and deposited in corresponding on-site skips To be collected by a Registered Waste Carrier, through a Registered Broker. The latter will make the necessary arrangements on behalf of the Developer for the export of the waste. Tins of non-hazardous material (e.g. water based paints), shall be consigned to the Sant' Antnin waste facility.

Waste Type	Waste Code as per LN 337/2001	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 15 02: Absorbents, filter materials, wiping cloths and protective clothing</b>						
Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances oil filters used in on-site equipment	15 02 02	H	Depends on age, type and condition of vehicles and equipment used	Can be a health hazard if not managed properly	On-site servicing shall be limited to equipment stationed on the site e.g. (air compressors and mortar mixers) During construction works, on-site servicing shall be minimal	To be transported to the Contractor's plant/yard to be stored in a hazardous waste container, the technical specifications of which shall be approved by the MEPA. To be collected by a Registered Waste Carrier, through a Registered Broker. The latter will make the necessary arrangements on behalf of the Developer for the export of the waste.
<b>Category 17 01: Concrete, bricks, tiles and ceramics</b>						
Concrete	17 01 01	N				
<i>Subdivided into:</i>						
Leftover cement-based mortars used for pointing and plastering	17 01 01	N	<1 tonne	Left-over concrete is hazardous, with respect to aquatic environments when we	Mortar and plaster mixes should be small in order to minimise leftover material In construction sites, such mixes are small and prepared frequently as fresh mortars and plaster mixes are easier to handle	To be poured in a container preferably steel, and left to dry. To be disposed of in an inert waste landfill (Ta' Zuta). The mixer should be washed in the vehicle washing area.

Waste Type	Waste Code as per LN 337/2001	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
Concrete	17 01 01	N	280 tonnes	Leftover concrete is hazardous, with respect to aquatic environments when wet Contact with wet cement can cause both dermatitis and burns: Skin affected by dermatitis feels itchy and sore, and looks red, scaly, and cracked. Cement is capable of causing dermatitis by two mechanisms - irritancy and allergy The principal cause of burns is thought to be the alkalinity of the wet cement	Orders for concrete mixes shall be accurate, in order to minimise leftover material	<p><b>Option 1</b> To be left to dry in pits in the supplier's plant. The dried material be disposed of in an inert waste landfill (Ta' Żuta).</p> <p><b>Option 2</b> (most practical under current circumstances in Malta) The supplier can plan works within the plant in a manner that permits leftover concrete in returning ready-mix trucks to be used for the casting of pre-cast products.</p> <p><b>Option 3 (preferred)</b> The immediate or later reuse of the left-over mixes through the adoption methods such as the 'stoning out' which involves the addition of coarse aggregate and water in the mixer drum and bringing up of the mixture to the point of discharge four to five times. Mix to be retained in drum overnight. Subsequently, the aggregate shall be integrated into a (continued in next row)</p>
Blinding to foundations	17 01 01	N	<1 tonnes			

Waste Type	Waste Code as per LN 337/2001	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
						<p>(continued from previous row)</p> <p>This method is not suitable after a minority of mix types, and can be used only in plants, which use loaders and ground level aggregate storage bays. In Malta, most plants use this system.</p> <p>In cases where such systems are not available, alternative approaches to the reuse of concrete mixes are possible.</p> <p>Concrete suppliers should be required to reuse concrete mixes, given that specialist advice on concrete mix design is easily available in Malta.</p>

Waste Type	Waste Code as per LN 337/2001	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 17 01: Concrete, bricks, tiles and ceramics</b>						
225mm HCBs Franka stone blocks Left overs	17 01 02	N	30 tonnes	May liberate dust Likely emissions of PM <sub>10</sub>	To be sprayed or sprinkled with water on a regular basis during: <ul style="list-style-type: none"> <li>temporary storage</li> <li>transport for disposal or reuse</li> </ul>	To be temporarily stored in on-site bins/skips which shall be covered with heavy-duty tarpaulin and kept wet by means water spraying or sprinkling. <b>Option 1</b> To be transported to an inert waste landfill, at Ta' Zuta, for disposal. <b>Option 2 (preferred)</b> To be transported to a crushing facility, where material shall be crushed and later used as an aggregate. Crushed concrete may be reused as an aggregate in new cement concrete or any other structural layer. In this case, the crushed material is blended with a new aggregate.

Waste Type	Waste Code as per LN 337/2001	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
Tiles and ceramics	17 01 03	N				
<i>Subdivided into:</i>						
Ceramic floor tiles	17 01 03	N	<5 tonnes	May liberate dust Likely emissions of PM <sub>10</sub>	To be sprayed or sprinkled with water on a regular basis during: <ul style="list-style-type: none"> <li>temporary storage</li> <li>transport for disposal or reuse</li> </ul>	To be stored in skips. <b>Option 1</b> To be transported to an inert waste landfill, at Ta' Zuta, for disposal. <b>Option 2 (preferred)</b> To be transported to contractor's plant. Ceramic tiles can be re-used for backfill. Marble chippings shall be used for the making of terrazzo tiles.
Ceramic wall tiles	17 01 03	N	<5 tonnes			
Marble works Marble elements shall be cut to size at the contractor's plant	17 01 03	N	<5 tonnes			
<b>Category 17 02: Wood, glass, and plastic</b>						
Plastic leftovers from wires, pipes	17 02 03	N	<1 tonne	Time, expense, and energy needed to remove waste from the system	Leftovers to be minimized through detailed scheduling and accurate ordering of materials	To be separated and deposited in corresponding on-site skips. To be collected by a Registered Waste Carrier, through a Registered Waste Broker, and consigned to the Sant' Antnin waste facility for recycling.

Waste Type	Waste Code as per LN 337/2001	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 17 03: Bituminous mixtures, coal tar and tarred products</b>						
Bituminous mixtures containing coal tar Roof Membrane	17 03 01	H	<0.15 tonnes	If not managed properly ground water could become contaminated with the tarred products	Orders for waterproofing membrane to be accurate, in order to minimise leftover material	To be stored in a sealable hazardous waste container, the technical specifications of which shall be approved by the MEPA. To be collected by a Registered Waste Carrier, through a Registered Broker. The latter will make the necessary arrangements on behalf of the Developer for the export of the waste. 17 03 02 can be deposited at the Sant' Antrnin waste facility.
<b>Category 17 04: Metals and alloys</b>						
Copper, bronze, brass Leftovers from copper pipes	17 04 01	N	<0.5 tonnes	Metals, if not recycled, need a large amount of energy, time and money to be removed from the ecosystem	Leftovers to be minimized through detailed scheduling and accurate ordering of materials	To be separated and deposited in corresponding on-site skips To be collected by a Registered Waste Carrier, through a Registered Waste Broker, and consigned to the Sant' Antrnin waste facility for recycling.

Waste Type	Waste Code as per LN 337/2001	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
Iron and steel	17 04 05	N	<1 tonne	Metals, if not recycled, need a large amount of energy, time and money to be removed from the ecosystem	Leftovers to be minimized through detailed scheduling and accurate ordering of materials	To be separated and deposited in corresponding on-site skips <b>Option 1</b> To be collected by a Registered Waste Carrier, through a Registered Waste Broker, and consigned to the Sant' Antnin waste facility for recycling. <b>Option 2</b> Leftover material recycled at Contractors' plant This option depends on which contractor is commissioned with the Construction Works.
Cables	17 04 11	N	<0.5 tonnes	Metals, if not recycled, need a large amount of energy, time and money to be removed from the ecosystem	Leftovers to be minimized through detailed scheduling and accurate ordering of materials	To be separated and deposited in corresponding on-site skips To be collected by a Registered Waste Carrier, through a Registered Waste Broker, and consigned to the Sant' Antnin waste facility for recycling.

Waste Type	Waste Code as per LN 337/2001	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 17 08: Gypsum-based construction material</b>						
Gypsum-based construction material	17 08 01	N				
<i>Subdivided into:</i>						
Solid gypsum plasterboard	17 08 01	H	<1 tonne	May liberate dust Likely emissions of PM <sub>10</sub> . Contains crystalline silica Eye contact to airborne dust may cause immediate or delayed irritation or inflammation. Eye exposures require immediate first aid and medical attention to prevent significant damage to the eye	Gypsum boards will be used after the construction works, as the partitioning shall be carried out in accordance with the requirements of the company which leases the office space. Leftovers to be minimized through detailed scheduling and accurate ordering of materials Cutting of material requires the use of power tools connected with dust extraction equipment and eye protection. Material to be handled as indicated in corresponding MSDS Waste gypsum plasterboard to be stored in skips located in protected areas to ensure that they are kept dry	To be separated and deposited in corresponding on-site skips. Skips should be covered or located in a sheltered area in order for material to be kept dry To be collected by a Registered Waste Carrier, through a Registered Broker. The latter will make the necessary arrangements on behalf of the Developer for the export of the waste. Recycled gypsum can be exported for re-introduction into the manufacture of new plasterboard. The material is also useful for soil amendment and household products, such as cat litters.
Gypsum plastering	17 08 01	H	<0.5 tonnes		Leftovers to be minimized through detailed scheduling and accurate ordering of materials	To be poured in a metal container and left to dry Subsequently to be broken up and mixed with backfill material

Waste Type	Waste Code as per LN 337/2001	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 20 01: Municipal waste</b>						
Mixed municipal waste Mainly: <ul style="list-style-type: none"> <li>biodegradable waste from packed lunches</li> <li>plastic and glass bottles for water and soft drinks</li> </ul>	20 03 01	N	circa 45 tonnes 0.6 tonnes per annum per capita for 50 persons over 71 weeks	Time, space, expense, and energy needed to remove waste from the system If not managed well infestation of vermin and other pests and bad odours may occur	On-site workers shall be provided with waste separation facilities and encouraged to separate waste	Where possible waste should be separated and deposited in the appropriate recycling bins Bins should be covered in a way to prevent infestation of vermin, strays, and other pests The refuse storage facilities should consist of standard covered skips on wheels which are emptied regularly by a registered waste broker, and deposited at the Sant' Antnin waste facility for treatment and re-cycling

Construction Waste  
**Operations Waste**

Waste Type	EWC	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>Category 15 01 Packaging</b>						
Paper	15 01 01	N	50 tonnes	Use of too much paper has resulted in, among other adverse effects, deforestation in many parts of the world. It takes paper between 2 to 5 months to biodegrade.	The hotel management shall be following a policy that refers to the following practices: <ul style="list-style-type: none"> <li>the adoption of reduce, reuse and recycle practices;</li> <li>the use of products with the least amount of packaging; and</li> <li>the separation of packaging waste at source</li> </ul>	A Registered Waste Carrier (operating through the Registered Waste Brokers) will make collections from each of the underground garages and the waste will be taken to the Sant'Antnin waste facility for recycling.
Cardboard and cartons	15 01 01	N	153 tonnes			
Plastic film	15 01 02	N	91 tonnes	Time, expense and energy needed to remove waste from the system.	The hotel management shall be following a policy that refers to the following practices: <ul style="list-style-type: none"> <li>the adoption of reduce, reuse and recycle practices;</li> <li>where possible, products with fewer plastic packaging and more biodegradable options should be used; and</li> <li>plastic packaging should be separated.</li> </ul>	A Registered Waste Carrier (operating through the Registered Waste Brokers) will make collections from each of the underground garages and the waste will be taken to the Sant'Antnin waste facility for recycling.
Plastic bottles	15 01 02	N	59 tonnes	If not recycled, it takes plastic bags 10 to 20 years to biodegrade. Even worse it takes plastic 6 pack holders 450 years to biodegrade whereas plastic bottles never biodegrade.		
Polythene	15 01 02	N	4 tonnes			
Other plastics	15 01 02	N	17 tonnes			
Wooden packaging	15 01 03	N	6 tonnes	The extensive use of wood has resulted in deforestation which in turn has a very negative impact on climate and flora and fauna	The hotel management shall be following a policy that refers to the following practices: <ul style="list-style-type: none"> <li>the adoption of reduce, reuse and recycle practices;</li> <li>where possible products with other more eco friendly packaging should be chosen; and</li> <li>wood should be reused or recycled.</li> </ul>	A Registered Waste Carrier (operating through the Registered Waste Brokers) will make collections from each of the underground garages and the waste will be taken to the Sant'Antnin waste facility for recycling.

Waste Type	EWC	Non-hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
Ferrous metal cans	15 01 04	N	14 tonnes	Time, expense and energy needed to remove waste from the system. If not recycled, it takes tin cans 50 to 100 years and aluminium cans 80 to 100 years to biodegrade.	The hotel management shall be following a policy that refers to the following practices: <ul style="list-style-type: none"> <li>the adoption of reduce, reuse and recycle practices;</li> <li>where possible products with other more eco friendly packaging should be chosen; and</li> <li>any remaining waste should be separated and deposited in the appropriate recycling bins present in the complex.</li> </ul>	A Registered Waste Carrier (operating through the Registered Waste Brokers) will make collections from each of the underground garages and the waste will be taken to the Sant'Antrnin waste facility for recycling.
Aluminium cans	15 01 04	N	5 tonnes			
Aluminium foils	15 01 04	N	4 tonnes			
Glass packaging	15 01 07	N	280 tonnes	Time, expense and energy needed to remove waste from the system. Glass is non biodegradable and hence very harmful to the environment. Could cause injuries if not handled properly.	The hotel management shall be following a policy that refers to the following practices: <ul style="list-style-type: none"> <li>the adoption of reduce, reuse and recycle practices;</li> <li>where possible products with other more eco friendly packaging should be chosen;</li> <li>glass especially jars and bottles should be reused; and</li> <li>Any remaining waste should be separated and deposited in the appropriate recycling bins present in the complex.</li> </ul>	A Registered Waste Carrier (operating through the Registered Waste Brokers) will make collections from each of the underground garages and the waste will be taken to the Sant'Antrnin waste facility for recycling.

Waste Type	EWC	Non-hazardous Hazardous	Quantity	Potential Impact	Management Considerations	Waste Management
<b>20.01 Municipal Wastes (separately collected fractions)</b>						
Food remains	20 01 08	N	870 tonnes	Bagging these materials and placing them into the garbage collecting system uses valuable landfill space, removes nutrients from the environment and imposes unnecessary expenses.	<ul style="list-style-type: none"> <li>Waste should be separated and placed into acceptable biodegradable bags.</li> <li>These should be stored in such a way so as to prevent pests, vermin and strays access. This prevents both infestation from unwanted pests and also any undesirable smells and spillages.</li> </ul>	The waste will be stored temporarily in a cold room and transported on a daily basis by a Registered Waste Carrier (operating through the Registered Waste Brokers) to the Sant' Antrnin waste facility.
Textiles	20 01 11	N	22 tonnes	Time, expense and energy needed to remove waste from the system.	Guests should be advised to request the minimum possible of changes of towels, sheets, and so on.	Otherwise, the appointed Registered Waste Carrier (operating through the Registered Waste Brokers) will transport the textiles to a Civic Amenity Site
<b>Category 20.03 Municipal Wastes: other municipal waste</b>						
Non-recyclables	20 03 07	N	225 tonnes	Time, space, expense and energy needed to remove waste from the system.	Such wastes shall be transported for landfilling in the Ta' Żwejra waste facility.	