

Environmental Management Plan (EMP)

Project Name:	Manchester Aquatic Centre	Contract No:	10007173
Completed by:	Duncan Edwards	Date:	

Revision Number	Description of changes made	Updated by	Date of Update

This document forms Appendix B.2 of the Construction Phase Plan.



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1. Introduction

[Throughout this document red text is provided as a prompt, and **must be edited or deleted** in line with project specific requirements]

This EMP has been prepared in accordance with the Kier SHEMS Environmental Management Standards and Guidance. It identifies specific environmental issues associated with Manchester Aquatics Centre and stipulates the procedures that will be used to manage them. Relevant environmental information will be communicated as required.

All amendments to this EMP must be made and documented by project management in consultation with the Safety, Health and Environmental Manager or Environmental Manager / Adviser.

2. Environmental Aspects & Impacts

Prior to commencement of the project an environmental aspect and impact assessment must be undertaken in accordance with the Aspect and Impact Management Standard [SHEMS-STD-GR-067](#). For guidance on completing the assessment please contact your Safety, Health and Environmental Manager or Environmental Manager / Adviser.

The assessment looks at each site activity against the following environmental aspects:

- Emissions to Air
- Emission to Land
- Emissions to Water
- Waste Generation
- Nuisance & Environmental Health
- Ecology & Biodiversity
- Cultural Heritage
- Use of Raw Materials
- Use of Natural Resources

Details of the control measures identified in the assessment will be communicated to relevant subcontractors. Subcontractors must manage all risks / impacts associated with their work activity / package in accordance with this document.

Where the subcontractor identifies additional environmental risk / impacts the Project Environmental Co-ordinator (PEC) and Project Manager must be informed, and the Aspect & Impact Assessment must be reviewed and amended as required.

In the event subcontractors undertake works that require reference to document(s) listed in section 2.3 of the Construction Phase Plan (Part A), these will be provided / incorporated into their contract as part of the subcontract documentation.

Kier may, from time to time, externally communicate information relating to significant environmental aspects and the company's performance. Such decisions will be made by appropriate management and documented.

3. Specific Project Environmental Requirements

This section incorporates information derived from documents scheduled in 2.3 of the Construction Phase Plan.

[Include an overview of the **most significant** environmental aspects and impacts. Where relevant, reference should be made to the **Site Constraints Layout Plan** (schedule II of this document), environmental reports and surveys such as site investigations, ecological surveys, etc. Should any of the main headings below not be relevant, please indicate this, but do not delete the heading. All other text can be edited or deleted as appropriate].

3.1 Unexploded Ordnance

The majority of works are internal and the risk of UXO is low

3.2 External (Client / Enforcing Authority) Requirements

Planning conditions such as site hours, wheel washing requirements, traffic management and logistics, Biodiversity Gain requirements etc. To verify if Planning condition required

Agreement to use local suppliers / labour and employ apprentices (socio-economic benefits to the immediate and surrounding area is in the CSR plan.

No Monitoring requirements for noise, dust and vibration.

Section 61 not required.

KPI monitoring requirements and inline with the SHE Action plan and the Sustainability Framework BREEAM or CEEQUAL is not applicable on this project

Materials with recycled content and low embodied energy have not been identified with this project.

Considerate Constructors Scheme, e.g. minimum score. Applied, minimum score of 40

Employment and / or training opportunities for local people. Meeting with 30th September @3pm.

Liaison / working with schools and local community groups. Detailed Teams, General, 15 Corporate Social Responsibility, 02 Community Engagement.

Volunteering and charity work.

3.3 Surface Waters, Wells and Source Protection Zones

[Please use the hyperlinks to complete the table below]

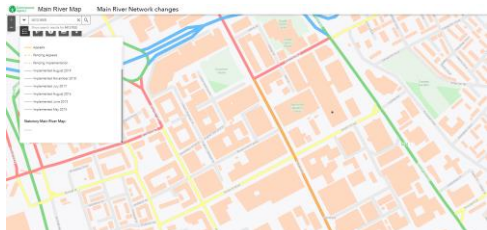
England - click [here](#) to identify main rivers, [here](#) for flood zones and [here](#) for Source Protection Zones

Wales – click [here](#) for Source Protection Zones

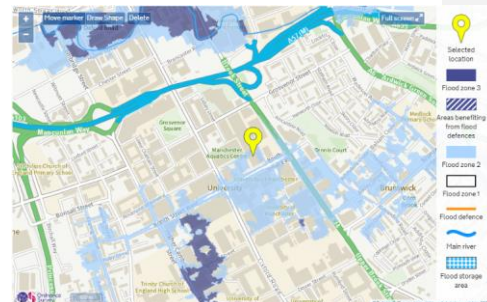
Scotland - contact the Scottish Environment Protection Agency [SEPA](#)

Project Located Within	Applicable (Y / N)	Authorisations
8m of a Main River, culvert or flood defence	N	FRAP
16m of a tidal river, culvert or flood defence	N	FRAP
16m of a sea defence structure	N	FRAP
Flood Zone 2 or 3	Y - In the boundary of a flood zone 2	Flood Risk Assessment
Source Protection Zone 1	N – Boundary of total catchment area	Piling Risk Assessment and no discharge to piling matt (option 2b of SHEMS-MST-CON-0082)
In, under, over or within 8m an Ordinary Watercourse	N	Ordinary Watercourse Land Drainage Consent / lead local flood authority agreement
50m of a watercourse	N	No discharge to piling matt (option 2b of SHEMS-MST-CON-0082)
250m spring, well or borehole	N	

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Environmental Management Plan



Flood risk assessment undertaken during planning. Has this happened?

Trade Effluent Consent applied for via Client. No other Permits or other authorisations required. TBC re Bats – but unexpected.

No abstraction points / wells.

Fuel storage should be a minimum of 10m from drains.

A site drainage plan/constraints plan shall be produced to identify all surfaces (blue) and foul water (red) drains to aid water management on site and to aid emergency responses. All foul water gullies identified shall be protected as required by means of witches hats, (Drain Guards) sand bags, or similar, to prevent any unauthorised discharges to the filtration ponds.

Complete permit to pump/discharge prior to any pumping/discharging activity.

Cleanliness of site hard standings shall be monitored by the project team, and necessary cleaning actioned. A road sweeper will be employed to undertake routine monitoring.

Discharges from excavations and surface water etc: rain water will be pumped onto ground, and filtered through a silt sock before being pumped onto grass or pond. Discharges to drains/filtration ponds should always be free of silt, have a neutral pH (i.e. pH 6 to 9) and be free of any obvious polluting matter. Where discharges require treatment the use of a suitable silt sock will be used. These must be maintained to ensure that the discharge remains suitable at all times. RAMS will be in place for the work detailing who is responsible for managing the process / recording etc. and ensure the RAMS are signed off the SHE team before works begin. A permit to pump/discharge will also be completed. Permission from the client will also be sought to pump into the filtration ponds

A simple visual test can be undertaken to ensure that the water clarity is fit to discharge. The results will be recorded on the Dewatering Monitoring Log noting whether the water is clear, slightly cloudy or fail (i.e. can't see hand through bottle). Any other unusual observations (e.g. odour, floating matter, discoloration, etc) should also be noted. If failure is recorded pumping, stop and contact supervisor immediately. This log should be maintained in the EMP. Discharges under consent should be monitored as per the conditions of that consent.

Concrete Washout: Controls for dealing with concrete wash water should be put in place before concrete mixing or deliveries start on site. These should be in line with the Kier Guidance. Where possible a concrete sock will be used or a contained concrete wagon. Where this is not possible the following should be



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undertaken: In a designated area (the only area on site where concrete activities are permitted to wash out, including mixers, barrows and rakes). A Mudtech Concrete washout facility should only be used for washing off and washing out equipment and tools used in the concreting operation and not un-used concrete. The amount of water used to wash off the equipment should be minimised. Where possible the Mudtech water should be reused over preference to the concrete wagon using fresh water. Routine monitoring should take place to check for pH of the water. A pH of over 9 should be treated with pHblue. Monitoring and actions should be recorded. At the end of the concreting process treated concrete washout waters can be pumped away by tanker. The positioning of the washout facility should be always as far as possible away from a filtration pond or drain (a minimum of 10m). It should also be placed in a suitable area such as near the exit. Un-used/excess concrete should ideally be utilised on site in other ancillary works. Untreated Washout liquid should not be discharged over ground or to filtration pond due to high chromium content and high PH.

3.4 Contaminated Land / Groundwater & Dewatering

No known hydrocarbon contamination – [sampling is currently underway](#).

Areas used for the disposal of other wastes, e.g. asbestos or Japanese knotweed. Asbestos survey required.

CFA, LDA and driven pile solutions. 16no piles required at the main entrance location, depth expected to be 7.5m, full details not received.

Re-use or disposal of groundwater, e.g. permits required / obtained.

N/A to this Project. ???

3.5 Standing Heritage & Archaeology

There are no listed / protected Construction and structures, and therefore no consents required.

There are no conservation and other designated areas.

No protection of WWII 'pill boxes' and anti-tank defences is required as non present on site.

No Archaeological investigations of sensitive areas required.

No work in a conservation area.

3.6 Sensitive Neighbours

[Cross reference external (client and enforcing authority) environmental requirements, including site hours, wheel washing requirements, travel route, deliveries and noise, dust and vibration monitoring]

Schools. Manchester Business School East. Manchester University Engineering Building A.

Healthcare facilities. N/A

Places of worship. Church of Jesus Christ of Latter-day Saints, 136 York St Manchester, M1 7XN.

Weekday openings times Monday to Friday 7-9pm apart from Wednesday's opening of 12-1pm.

Residential areas. The nearest residential buildings are over 180m away to the west and 105m to the north.

Chinese Restaurant adjacent to compound set up between Oxford Road and Boundary Street.

Local community meetings.

3.7 Ecology & Biodiversity

[Please use the hyperlink to complete the table below]

Terrestrial or marine designated site for nature conservation

England - click [here](#)

Project Located Within	Applicable (Y / N)	Notes
Local Wildlife Site (LWS)	N	Discharge of planning condition
Local Nature Reserve (LNR)	N	Discharge of planning condition
National Nature Reserve (NNR)	N	Discharge of planning condition
RAMSAR	N	HRA and Assent / Consent for works
Site of Special Scientific Interest (SSSI)	N	Assent / Consent for works
Special Area of Conservation (SAC)	N	HRA and Assent / Consent for works
Special Protection Area (SPA)	N	HRA and Assent / Consent for works
500m of SSI, SAC or SPA	N	Temporary Dewatering from Excavations to Surface Water RPS cannot be used
50m of any of the designated sites listed above	N	No discharge to piling matt (option 2b of SHEMS-MST-CON-0082)



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European Protected Species Licence required / obtained. – TBC re Bats
 No Pre and Post Biodiversity Gain assessment required.
 No Tree Preservation Orders (TPOs). - TBC
 Tree retention and protection (refer to Tree & Hedgerow Protection [SHEMS-MST-CON-0086](#)). Tree
 renation and removal TBC after survey
 Protected plant species, protection / translocation required./ Protected animal species, e.g. bats, birds, -
 include protection required, specific demolition requirements, construction of receptor areas, nest boxes,
 etc. – TBC on survey
 There are no Invasive species, e.g. Japanese knotweed and Giant hogweed within the red line boundary.

Biodiversity Gain (BG)

A BG assessment has not been carried out in tandem with the Preliminary Ecological Assessment

3.8 Project Specific Sustainability Targets

Element	Action	Manchester Aquatic Centre
Pollution Prevention	Significant incidents	0
Greenhouse Gas Impact	Reduce electricity and fuel use by 5%	3.71tCO2e/ £m
	Record subcontractor fuel use	All projects
	Reduce subcontractor emissions (Scope 3 emissions) by using low emission plant, equipment and / or fuel, i.e. HVO+	Plant Equipment Fuel (Sunbelt rentals can assist)
Zero Waste	Implement the principles of the circular economy and implement a take-back or closed-loop recycling scheme	<u>Pallet</u> <u>Protec</u> <u>Armstrong</u> <u>Dulux</u> <u>Rockwool</u> <u>Desso</u> <u>Recofloor</u> <u>TCI (GB)</u>
	Divert non-hazardous construction, demolition and excavation wastes from landfill	90%
	Reduce the volume of construction wastes generated by 10%	50.4m3/£m
Protection of Habitats & Resources	Record and reduce water use by 10%	80.0(m3/£m)
	Biodiversity Gain	No Biodiveristy Net loss – replacement of trees removed like for like.

Commented [H1]: TBC once spec confirmed



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4. General Project Environmental Requirements

4.1 Waste Management

All waste will be managed in accordance with the Waste Management Standard [SHEMS-STD-GR-065](#) and where relevant, the [Soil Management](#) and Contaminated Land [Standard](#) [SHEMS-STD-GR-061](#).

Manchester Aquatic Centre will manage waste through the implementation of a bespoke version of the Building Research Establishment (BRE) SMARTWaste tool. The project team will use SMARTWaste to identify and record waste streams, forecast waste volumes and identify suitable methods to eliminate, or where this is not practicable, reduce waste generated by the project.

When considering management options for identified waste streams, Kier and supply chain members will adhere to the principles outlined in the waste hierarchy below.



Kier and its sub-contractors must ensure waste is stored away from drains, boreholes, wells and controlled waters. Containers shall be in good condition and, where required, covered to prevent dust and litter being blown out. If there is any likelihood of stored waste contaminating the area surrounding the site, all necessary steps must be taken to ensure no contamination occurs. This may include the use of containment bunds with rain shelters and the use of sealed containers, i.e. clip-top drums and fluorescent tube coffins.

Before waste is treated and / or removed from Manchester Aquatic Centre, all subcontractors / waste contractors must provide the project team with legible copies of the following documentation:

- Environmental permits (mobile plant licences) and exemption certificates authorising on-site crushing and screening activities.
- Waste Carriers Registration Certificates.
- Environmental Permits, (Waste Management Licences and Pollution Prevention Control Permits).
- Notification certificate of exemption from environmental permitting.

The project team and, where applicable, subcontractors will ensure that the removal of all inert / non-hazardous waste is recorded on waste transfer notes (WTNs). Legible copies of all WTNs must be kept for a minimum of two years following collection. These documents will be stored on site and made available on request.

The project team and, where applicable, subcontractors will ensure the removal of all hazardous waste is recorded on hazardous waste consignment notes (HWCNs). Legible copies of all HWCNs must be kept for a minimum of three years following collection. These documents will be retained on site and made available on request.

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Legible copies of all WTNs and HWCNs, recording the removal of waste from Manchester Aquatics Centre must be issued to Kier. This includes waste generated on site by subcontractors.

When removing hazardous waste from projects located in England or Wales, a premises code must be recorded on all HWCNs. A premises code has been generated in accordance with section 4.4.2 of the Waste Management Standard [SHEMS-STD-GR-065](#). The premises code for the project is 10007173

4.2 Storage of Fuel, Oils & Building Chemicals

Fuel, oil and chemicals will be managed in accordance with the Pollution and Nuisance Standard [SHEMS-STD-GR-063](#) and COSHH Standard [SHEMS-STD-GR-051](#). Please also refer to Oil & Fuel Storage – Above Ground [SHEMS-MST-CON-0080](#) and Chemical & Paint Storage [SHEMS-MST-GR-0042](#) Minimum Standards

Containers must be stored within a Spill Nappy (or similar), bund or any other suitable secondary containment system (SCS). All containers must be located in a safe place to minimise the risk of damage and locked-off when not in use.

For oil tanks, intermediate bulk containers and mobile bowsters the SCS must be able to hold:

- Where one container is being stored - a minimum of 110% of the total volume.
- Where more than one container is being stored - a minimum of 110% of the largest container's storage volume, or at least 25% of their total volume (whichever is greater).
- For drum storage, the interceptor tray must be able to hold at least 25% of the total storage capacity of the drums.

Bunded areas must be made impermeable to water and oil and protected from the ingress of rainwater. The base and walls of the bund must not be penetrated by any valve, pipe or opening that is used for draining the system.

Oil storage areas (including generator locations) that are likely to be in use for more than 2 months must have an impermeable surface, i.e. they must be concrete. The impermeable surface must extend a sufficient distance to ensure minor leaks and spills from refuelling operations can be safely identified and contained. Well stocked, appropriately sized spill kit(s) and plant nappies or equivalent pads must be located at each storage area.

The location of all oil storage areas and mobile bowsters must be inspected and approved by Kier before use. Approved locations will be labelled on the Site Constraints Layout Plan (see schedule II). Where practicable, separate oil storage areas should be established for each subcontractor.

All oil storage areas and mobile bowsters must clearly display an Enviro-tag. Enviro-tags must be completed by Kier as part of the inspection regime prior to installation and first use of all oil storage areas and mobile bowsters. Subsequent routine monitoring must be undertaken as a minimum on a weekly basis. During inspections, relevant guidance provided in this minimum standard should be referenced by scanning the QR code printed on the Enviro-tag.



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4.2.1 Working on Liquid Fuel Lines & Storage Systems

Works on fuel tanks and lines must be covered by suitable RAMS. Where applicable, control measures must account for potential environmental risks, e.g. surface waters, groundwater, drinking water treatment facilities and nature conservation sites. A photographic record of fuel line and / or tank decommissioning works must be retained with photographs taken before, during and on completion of the works.

All wastes, including fuel and oils must be managed in accordance with the Waste Management Standard [SHEMS-STD-GR-065](#).

4.3 Managing Concrete Wash Water

Concrete wash water contains suspended solids and is highly alkaline (has a high pH). Solutions that are highly alkaline are as harmful to the environment as strong acids. Unlike wet concrete that is poured into the ground, concrete wash water is very mobile and can easily enter drains and controlled waters, e.g. groundwater, rivers and reservoirs, causing significant harm to aquatic life and the environment.

The hierarchy of control described in Managing Concrete Wash Water [SHEMS-MST-CON-0082](#) will be used to identify and implement suitable control measures for managing concrete wash water. Options 1C-3A will **only** be considered where the subcontractor and / or concrete supplier can demonstrate 1A and 1B are not practicable. A member of the Kier SHE team must approve selected management options prior to concrete being delivered to site. Approved site-specific management options are filed in schedule IV of this EMP.

The location of all proprietary equipment, containers etc. must be inspected and approved by Kier before use. Approved locations will be labelled on the Site Constraints Layout Plan (see schedule II).

All areas used to manage concrete wash water must clearly display an Enviro-tag. Enviro-tags must be completed by Kier as part of the inspection regime prior to installation and first use of all concrete wash water areas. Subsequent routine monitoring must be undertaken as a minimum on a weekly basis. However, where a Temporary Trade Effluent Consent is in place, monitoring must be undertaken as specified within the authorisation.



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4.4 Particulate Matter (Dust) & Noise

Dust and noise will be managed in accordance with the Pollution and Nuisance Management Standard [SHEMS-STD-GR-063](#)

4.4.1 Mobile Crushing & Screening Process

Crushing and screening will be managed in accordance with the Waste Management Standard [SHEMS-STD-GR-065](#) and the Demolition – Mobile Crushing and / or Screening Operations Minimum Standard [SHEMS-MST-GR-0050](#).

Crushing and screening of demolition material must be conducted in accordance with the plant operation manual and, where applicable, environmental permit (mobile plant licence) / waste exemption certificate. The operator must use the best available techniques (BAT) for preventing or, where this is not practicable, reducing emissions from the installation. The following items must be considered when attempting to reduce the environmental impact of this process:

- Location
- Operation
- Maintenance
- On-site transfer of dusty materials
- Condition of roadways / haulage routes
- Stockpiling materials

4.4.2 General Site Activities

With regard to nuisance, the methodology in which work activities are undertaken must apply best practicable means (BPM) in order to minimise negative impact on local, sensitive receptors, such as schools and domestic dwellings. However, if measures to reduce excessive dust and noise are unsuccessful, work must stop and an alternative method devised before work can resume.

The following measures must be considered when attempting to reduce noise and dust:

- Use sheeted lorries and sealed / covered skips.
- Use dust extraction equipment when drilling and cutting.
- Damp down haulage roads and stockpiled materials in dry or windy weather.
- Sweep access roads regularly.
- Grass over / stabilise topsoil which is being stockpiled for landscaping or off-site re-use.
- Locate plant and equipment away from sensitive receptors.
- Use screens, including earth bunds to act as acoustic barriers.
- Isolate plant and equipment when not in use.
- Fit white noise systems on vehicles to reduce noise nuisance when reversing.
- Keep engine compartment doors closed.
- Limit vehicle movements on-site, e.g. use of one-way system.

4.5 Previously Unidentified Issues

If one or more of the following is discovered, work in that location must stop immediately and the Project Environmental Co-ordinator (PEC) informed:

- Contaminated soils.
- Archaeological remains or features.
- Suspicious objects.
- Underground storage tanks.
- Invasive species, e.g. Japanese knotweed.
- Protected species, e.g. badgers, bats, amphibians, reptiles and plant life.

4.6 Subcontractor and Supplier Environmental Reporting

[Where applicable, outline additional company / project specific reporting requirements]

Subcontractors and suppliers must adhere to the Responsible Procurement Policy [SHEMS-POL-GR-004](#). Where applicable, they must also provide the following information / documentation on a weekly basis to the Kier project team:

- A record of the number of litres of fuel delivered to site, e.g. red diesel (gas oil), white diesel, HVO and petrol.
- Volume of water used on site (where separate subcontractor supplies are in use, e.g. stand pipes).
- Legible copies of all waste transfer notes (WTNs) and hazardous waste consignment notes (HWCNs).
- Legible copies of all chain of custody certificates belonging to suppliers delivering new timber to site.
- Legible copies of all timber delivery notes.
- Legible copies of all recycled aggregate delivery notes (volume of aggregate must be recorded on notes).

4.7 Emergency & Incident Preparedness

To minimise the risk of a pollution incident, subcontractors must ensure all operatives understand the environmental risks associated with their work activity and what control measures are in place to eliminate or reduce negative environmental impact.

Major environmental incidents shall be reported and managed in accordance with MIRP Standard [SHEM-GR-STD-013](#).

Environmental emergency planning must be managed in accordance with the Fire Management Site Standard [SHEMS-STD-GR-020](#) and Appendix B.6 of the Construction Phase Plan. The Major Incident Response Plan must be implemented where relevant.

Investigation and reporting of environmental incidents must be undertaken in accordance with the Incident Reporting and Investigation Standard [SHEMS-STD-GR-011](#).

4.8 Monitoring, Auditing & Reporting

Please refer to 6.18 of the Construction Phase Plan.

4.9 Management Structure & Responsibilities

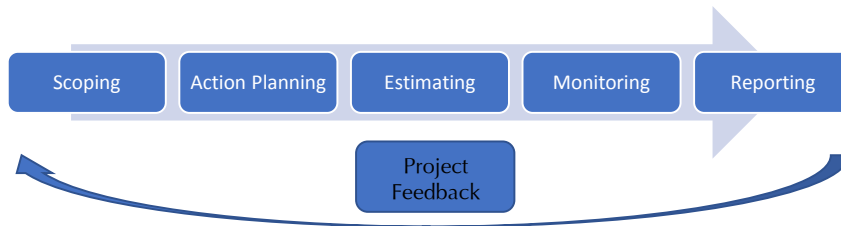
Please refer to 6.1 and 6.2 of the Construction Phase Plan.

4.10 Training Awareness & Competence

Please refer to 6.14 of the Construction Phase Plan

5. Resource Efficiency

Kier has adopted the principles of resource management planning as developed by the Waste and Resources Action Programme (WRAP). The resource management planning process is broken into five stages, together with a feedback loop.



By implementing the Construction Resource Efficiency Strategy, the project team will:

- Demonstrate innovation.
- Support the requirements of environmental assessment methods, such as BREEAM.
- Go beyond compliance.
- Build more efficiently and reduce risk.
- Achieve environmental benefits.
- Create savings for all stakeholders.

The online SMARTWaste platform and energy reports issued by Energise will be used throughout the contract to monitor, record and report environmental performance. Resource management planning will be documented in SMARTWaste sections 2, 3 and 4. Section 2 will record all waste and resource minimisation measures implemented during the various project phases.

5.1 Materials & Design

A list of design decisions has been recorded in schedule III of this plan. The items listed are based on the twelve resource efficiency themes identified by WRAP. Further information can be obtained from the project design manager / assistant design manager.

Timber and timber based products will comply with the Timber Purchasing Minimum Standard [SHEMS-MST-GR-0007](#).

[Cross reference external (client and enforcing authority) environmental requirements, including S.106 requirements relating to local suppliers and labour]

Indicate eco-scheme requirements, e.g. BREEAM or CEEQUAL (Excellent / Very Good) or DREAM
Record whether the BRE Green Guide to Specification and / or the web-based resource called Greenspec have been used to select materials and products. No BREEAM requirements
Provide details of materials with high recycled content, low embodied energy and low embodied water.
Provide details of prefabricated materials.
Where applicable, provide information relating to green roofs and walls.
Record the types of certificated timber that have been specified, e.g. FSC, PEFC or GiB.

Commented [H2]: TBC on specs

5.2 Soils & Aggregates

The following table records the requirement for soils and aggregates on the project.

[This table **must** be completed during preconstruction to ensure appropriate lead times are available to obtain CL:AIRE Materials Management Plans, etc. Where it is necessary to import topsoil, please refer to [SHEMS-GUI-CON-008 Importing Topsoil Guidance](#)]

Commented [H3]: To discuss for materials being used on site

Item	Origin	Y / N	Source	Volume (tonnes)	Use	Control
Untreated topsoil	Site	N	N/A	N/A	N/A	WFD / RPS Soils
Treated topsoil, e.g. screened		N	N/A	N/A	N/A	U1 / P19 / MMP
Untreated subsoils		N	N/A	N/A	N/A	WFD / RPS Soils
Treated subsoils, e.g. screened		N	N/A	N/A	N/A	U1 / P19 / MMP
Treated / untreated made ground		N	N/A	N/A	N/A	U1 / P19 / MMP
Recycled aggregates		N	N/A	N/A	N/A	U1 / P19 / MMP
Asphalt / Road Planings		N	N/A	N/A	N/A	U1 / P19 / MMP
Untreated topsoil	Import	N	Facility & address	N/A	N/A	U1 / MMP / RPS Soils
Treated topsoil, e.g. screened		N	Facility & address	N/A	N/A	U1 / MMP / RPS Soils / Manufac.
Untreated subsoils		N	Facility & address	N/A	N/A	U1 / MMP / RPS Soils
Treated subsoils, e.g. screened		N	Facility & address	N/A	N/A	U1 / MMP / RPS Soils / Manufac.
Virgin aggregates		Y / N	Facility & address	N/A	N/A	N/A
Recycled aggregates		Y / N	Facility & address	N/A	N/A	U1 / P19 / QP

[Where an MMP will / has been drafted, file a copy along with the Qualified Person Declaration Receipt in schedule V of this EMP]

5.3 Waste Management

For detailed information relating to the management of waste at [Manchester Aquatic Centre](#), e.g. targets, waste forecast, waste minimisation measures and waste records, please refer to the project's SMARTWaste Plan.

[Summarise the significant waste streams that will be generated – refer to SMARTWaste]

Pre-demolition / pre-refurbishment audit (including identification of non-waste salvage items).

Existing building elements with hazardous coatings / finishes, e.g. paint containing lead.

Waste segregation on / off site.

Hazardous waste streams and how they will be managed.

Waste exemption(s) required, e.g. U1 / Para 19 or Para 9 and T5 / Para 13 or 21.

Take back schemes, e.g. Travis Perkins.

Closed-loop recycling schemes, e.g. [Protec](#), [Armstrong](#), [Dulux](#), [Rockwool](#), [Desso](#), [Recofloor](#) and [TCL \(GB\)](#)

5.4 Energy, Fuel & Water

A full list of energy and water saving measures and initiatives are listed under section 2 of the project's SMARTWaste Plan.

Site accommodation at Manchester Aquatics Centre **conforms to / exceeds** the Site Accommodation & Welfare Units Minimum Standard [SHEMS-MST-CON-0081](#).

Commented [H4]: TBC once cabins confirmed

[Where site accommodation and welfare units exceed the current Minimum Standard, summarise additional eco-features]



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[Please insert an Environmental Aspect & Impact assessment for each asset / project covered by this EMP]

[Please insert a Site Constraints Layout Plan for each asset / project covered by this EMP – where applicable your plans should illustrate the following]

Areas prone to flooding

Existing drainage (storm water = blue, foul water = Red; combined = Red 'C') - update plan as required to include newly installed live drainage

Interceptors

Neighbours adjacent to site boundary

Oil and fuel storage

COSHH storage

Spill kits

Concrete wash water management location and method

Wheel wash

Areas or hotspots of known contamination

Boreholes and surface waters, e.g. rivers, streams and reservoirs, lagoons and attenuation ponds

Discharge points, e.g. when operating pumps

Waste management areas

Recycled / reused materials areas (including quantities)

European protected species (EPS)

Protected trees, hedgerows and on-site BNG areas

Listed / protected Construction and structures

Invasive plants

Standing heritage and listed Construction

Archaeological areas, e.g. watching brief, trial trenches and open area excavations

Schedule III - Design Decisions

[Please ensure the table below is completed for each asset / project covered by this EMP – insert additional tables as required]

Commented [H6]: To be completed

Design Decisions – 10007173 Manchester Aquatics Centre	Y / N
Reclaimed products or components have been specified	
Materials from demolition and / or other work phases have been incorporated into the design <i>Examples: Bricks and tiles to be reused, soils to be reused, stonework to be reused, architectural features, e.g. large coping stones to be reused as bench seating in landscaped areas.</i>	
The design, form and layout have been simplified <i>Examples: Size and position of window and door openings to suit whole brick / block / plasterboard dimensions. Room sizes to match plasterboard dimensions, identical grids to allow for formwork reuse. Designing out basements, raising formation levels, soil stabilisation, displacement piling or mini piles.</i>	
Components have been designed for off-site manufacture <i>Examples: Precast edge / ground beams / manholes. Prefabricated toilet / bathroom / kitchen pods, prefabricated service runs / risers, pre-packaged plant rooms, etc.</i>	
Designed as a process of assembly rather than construction	
Wet trades have been designed out	
Materials known to contain a high recycled content have been specified	
Materials and products are suitable for their application <i>Example: Floor tiles and wall finishes are not under / over specified.</i>	
Locally sourced and / or rapidly renewable materials have been specified <i>Example: Cork, linoleum and Grown in Britain (GiB) timber.</i>	
Using products with lower embodied water and / or carbon	
Low energy light fittings have been specified	
Low / zero carbon technologies have been specified	
High specification thermal insulation will be used	
Thermal modelling undertaken	
Effective ventilation systems used to reduce energy loss	
User control is carefully considered to ensure a healthy environment as well as allowing efficient energy use	
Rain / Grey / black water harvesting has been specified	
Low flow rate fittings have been specified	
Design adaptable for a variety of purposes during its life span	
Building elements and components can be maintained, upgraded or replaced without creating waste	
Design incorporates reusable / recyclable components and materials	
Building elements / components / materials easily disassembled	

Business Stream Form Construction Environmental Management Plan
Schedule IV - Wash Water Management Method Authorisation Forms and Aggregates Declarations

[Insert completed Wash Water Management Method Authorisation Form(s)]

TBC for Aggregates



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Business Stream Form Construction Environmental Management Plan
Schedule V - CL:AIRE Materials Management Plan and Qualified Person Declaration Receipt

[Insert CL:AIRE Materials Management Plan and Qualified Person Declaration Receipt]

N/A



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Schedule VI - Additional Schedules

[Where applicable, insert Water Management Plan, Construction Air Quality Plan, Pollution Prevention Action Plans, Permits]

N/A