

CONSTRUCTION MANAGEMENT PLAN

FOR A NEW BUILD 3-BEDROOM DETACHED HOUSE ON LAND TO THE SOUTH OF 102 RADSTOCK ROAD. PROPOSED NEW DROP KERB ON LIVERPOOL ROAD TO CREATE ACCESS FOR NEW DWELLING



**LAND ADJACENT TO 102,
RADSTOCK ROAD, READING,
RG1 3PR**

1.0 PROJECT DETAILS

Site: Land Adjacent To 102, Radstock Road
Reading
RG1 3PR

Contractor: FLM Properties Ltd

Site Manager: Dmitry Pyatkovsky

Description of works:

Proposal for a new build 3-bedroom detached house on land to the south of 102 Radstock Road. Proposed new drop kerb on Liverpool Road to create access for new dwelling.

2.0 CONSTRUCTION MANAGEMENT PLAN – (Reference points on drawings *ABP-RR102-37-CMP-0, ABP-RR102-37-CMP-1, ABP-RR102-37-CMP-2 & ABP-RR102-37-CMP-3*)

REF: (a) 'ABP-RR102-37-CMP-1' – The erection and maintenance of security hoarding, including decorative displays and facilities for public viewing, where appropriate. There will be decorative signs around the site boundary which will show the company logo and contact details. The site will have adequate secure boarding around the site boundary. Contact details will be displayed on the security hoarding which all the associated activities in the area can call if they have any questions or complaints regarding the development.

REF: (b) 'ABP-RR102-37-CMP-1' – Ingress and egress to and from the site for vehicles during site works period will be located at the existing main hoarding gate that enters to the driveway. The flow of vehicles in and out of site will be controlled by professional Traffic Marshal/Banks Man.

REF (c) 'ABP-RR102-37-CMP-1' – Restriction on the size of construction vehicles and machinery accessing the site to have a level of controlled circulation throughout the construction period. Any vehicles and machinery that access the site will be no more than 3.7m wide. This measurement is the maximum allowance for any construction vehicles or machinery to enter the site at the main gate. Proposed numbers and timing of truck movements throughout the day and the proposed routes will have no fixed timings. Trucks will be called on demand.

REF: (d) 'ABP-RR102-37-CMP-1' – Pedestrian access will remain as usual and construction works will be contained within the site boundary. No obstructions will occur to the public footpaths and will remain safe.

REF: (e) 'ABP-RR102-37-CMP-1' – Scaffolding will be erected to cover the entire building envelope. Full height scaffolding will require monarflex wrapped around the scaffolding during the construction works.

REF: (f) 'ABP-RR102-37-CMP-1' – Storage of plant and materials used in constructing the development. There is 1 location provided on site for storing plant and materials. The far corner of the site at ground level is where the mud flooring will be protected by 'Proplex 2mm Flame Retardant Sheets'. Proplex is sufficient for the project as it has the following properties:

- Manufactured from recycled plastic

- Flame retardant and approved to LPS 1207 standard
- Produced by ISO 9001 manufacturer
- Effective protection for windows, doors, walls and floors
- Strong, durable and lightweight
- Tear, puncture and impact-resistant
- Suitable for indoor and outdoor applications
- Waterproof, non toxic and resistant to chemicals
- Easy to cut, crease and bend
- Available in 2mm, 3mm and 4mm clear plastic
- Can be custom printed
- Very similar to Correx corrugated plastic sheeting

REF: (g) 'ABP-RR102-37-CMP-1' – Site worker convenience is located at the far right corner of the site with portal toilets and sinks facilities.

REF: (h) 'ABP-RR102-37-CMP-2' – Measures to be adopted to maintain the site in a tidy condition in terms of disposal/storage of rubbish, storage and unloading of building materials and similar construction activities. Providing a 6 yard skip measuring at (3.0m X 1.5m) / (10ft X 5ft) will be situated in the front driveway for disposing building waste materials.

REF: (i) 'ABP-RR102-37-CMP-2' – Circulation of construction skip vehicles accesses during the period of site works will be from the main gate. Vehicles will come off Liverpool Road, which is Radstock Road, where the main site entry and exit gate is located. Vehicle to be entering the site in reverse gear to collect or drop off the skip.

REF: (j) 'ABP-RR102-37-CMP-2' – The flow of vehicles in and out of site will be controlled by professional Traffic Marshal/Banks Man. The Traffic Marshal/Banks Man will provide a service that controls the flow of construction vehicles in and out of the site during work hours. No work shall be carried out before 08:00 and after 18:00, Mondays to Fridays and 08:00 till 13:00 hours on Saturdays, No work to be carried out on Sundays. The construction vehicles will be called on demand when it is required, but will be called between the hours of 09:00 till 15:00 to miss the school run as the local roads and footpaths will become congested and busy. Deliveries will not be made on site between 08:00 – 09:15 & 17:00 – 18:00, due to peak traffic hours.

REF: (k) 'ABP-RR102-37-CMP-2' – All materials are controlled within the site driveway. Works that take place will have most of its dust, debris, demolition and construction materials from public roads or places. There will be a water pressure jet located at the main access gates to clean the sediment runoff, dust, soil, debris, demolition and construction materials which could come out onto the road and public footpath. Traffic Marshal/Banks man will be situated at the main gate for control access and report to site workers not to clean the dirt on public areas out of the site boundary.

REF: (l) 'ABP-RR102-37-CMP-3' – Largest vehicle will be the scaffolding vehicle to enter and leave site from the driveway. This vehicle will be guided onto the site by the professional traffic marshal/banks man.

REF: (m) 'ABP-RR102-37-CMP-3' – loading and unloading of materials and machinery will take place within the site boundary in the driveway. Vehicles whether they are collecting or dropping off materials/machinery will have to reverse in, which will be guided by the traffic marshal/banks man. No public footpaths or roads will be blocked or obstructed for any long period of time. The only obstruction will occur when the construction vehicles are reversing onto site safely.

REF: (n) 'ABP-RR102-37-CMP-3' – Circulation of construction small scaffolding vehicle access during the period of site works will be from the main gate. Vehicle to be entering the site in reverse gear to allow the materials or plant machinery to be off loaded onto the driveway within the site boundary.

The mitigation measures taken for dust and emissions as well as the methodology for monitoring during construction are explained as follows:

- Low – Medium Mitigation Measures:
 - Site Planning:
 - Erect solid barriers to site boundary.
 - No bonfires.
 - Plan site layout – Machinery and dust causing activities should be located away from sensitive receptors.
 - Identify responsible person in charge.
 - Hard surface site haul routes.
 - Construction Traffic:
 - All vehicles to switch off engines – no idling vehicles.
 - Effective vehicle cleaning and specific wheel-washing on leaving site.
 - All loads entering and leaving site to be covered.
 - No site runoff of water or mud.
 - All non-road mobile machinery (NRMM) to use ultra-low sulphur tax-exempt diesel (ULSD) where available.
 - On-road vehicles to comply with the requirements of a possible future Low Emission Zone (LEZ) as a minimum.
 - Hard surfacing and effective cleaning of haul routes and appropriate speed limit around site.
 - Demolition Works:
 - Use water as dust suppressant.
 - Cutting equipment to use water as suppressant or suitable local exhaust ventilation systems.
 - Securely covers skips and minimise drop heights.
 - Wrap buildings to be demolished.
 - Site Activities:
 - Minimise dust generating activities.
 - Use water as dust suppressant where applicable.
 - Enclose stockpiles or keep them securely sheeted.
- Dust and Emissions Control Measures:
 - Pre-Site Preparation:
 - Machinery, fuel and chemical storage and dust generating activities should not be located close to boundaries and sensitive areas if at all possible.
 - Erect effective barriers around dusty activities or the site boundary.

○ Haul Routes:

- Unpaved haul routes can account for a significant proportion of fugitive dust emissions, especially in dry or windy conditions, when the generation of dust through the movement of vehicles is exacerbated. To comply with good practice, to should ensure that hard surfaces or paving are used for all haul routes, even if routes are temporary.
- Use consolidated surfaces on roads near to residential areas.
- Hard surface all major haul routes through the site (e.g. use recycled rubber blocks, concrete blocks or tarmac).
- Regularly inspect haul routes for integrity and repair if required.
- When the haul route changes, re-use surface where possible.
- Damping down method will include washing or damping down haul routes both within and outside the site boundaries. This is particularly important for this site as it is close to residential properties or other sensitive receptors. Measures will be implemented to consider the environmental and economic benefits from the use of groundwater sources on the site, as opposed to bringing drinking water onto site for the purpose of dust suppression. Where possible the source of water should be sustainable to maximise use and re-use of this resource.
- Use agreed wet cleaning methods or mechanical road sweepers on all roads during periods of dry weather.
- Clean road edges and pavements using agreed wet cleaning methods.
- Use agreed wet cleaning methods or mechanical road sweepers on all roads at least once a day or consider using fixed or mobile sprinkler systems.
- Provide hard standing areas for vehicles and regularly inspect and clean these areas.

○ Vehicles:

- The site manager should strictly carry out the following controls to reduce dust and particulates associated with vehicles –such as that from exhaust emissions, the contract of tyres on the road surface of dust blowing from materials carried:
- All vehicles should switch off their engines –no idling.
- Clean or wash all vehicles effectively before they leave a site if there is a risk of affecting nearby sensitive receptors.
- All loads entering and leaving site to be covered.
- Wheel wash vehicles before they leave a site.
- Hard surface haul routes and clean them effectively.
- Impose an appropriate speed limit around site.

○ Site Entrances/Exits:

- Measure will be put forward to employ the following control measures to help prevent dust being spread outside the site boundary by site vehicles at entrances and exits.
- No extra control measures required if there are no nearby sensitive receptors.

- Wash or clean all vehicles effectively before leaving the site if it is close to sensitive receptors. Ideally there should be a paved area between the wheel wash and before the public road.
- Provide a control zone around the site boundary to protect sensitive receptors (this could include an area of hardstanding).
- Provide effective vehicle cleaning and specific wheel-washing facilities at all exits; with hose pipes, adequate water supply and pressure and mechanical wheel spinners or brushes.
- Excavation and Earthworks:
 - Excavation and earthwork activities can be a potential source of dust outside the site if they are not properly controlled. These activities are essential, then developers need to act to minimise dust disturbance as much as possible.
 - All dusty activities should be damped down, especially during dry weather.
 - Temporarily cover earthworks if possible.
 - Minimise drop heights to control the fall of materials.
 - Re-vegetate earthworks and other exposed areas to stabilise surfaces.
 - Only remove secure covers in small areas during work and not all at once.
 - Use hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil.
- Stockpiles and Storage Mounds:
 - We are to avoid the use of long-term stockpiles on site wherever possible unless it performs the function of visual or noise screening. If necessary, the following measures will be in place:
 - Make sure that stockpiles exist for the shortest possible time.
 - Do not build steep sided stockpiles or mounds or those that have sharp changes in shape.
 - Whenever possible keep stockpiles or mounds away from the site boundary, sensitive receptors, watercourses and surface drains.
 - Wherever possible, enclose stockpiles or keep them securely sheeted.
- Cutting, Grinding and Sawing:
 - A simple method to reduce dust emissions when cutting or grinding this method is suitable for all sizes of demolition or construction sites. When materials, such as concrete slabs or bricks, are cut with a power tool without extraction or suppression, a second site worker can pour water from a plastic bottle over the material as it is being cut. This greatly reduces the amount of dust generated and can stop the occurrence of a statutory nuisance.
 - All equipment should use water suppressant or suitable local exhaust ventilation systems.
 - Use dust extraction techniques where available.
 - All other equipment should be fitted with water suppressant systems.
 - Use local exhaust ventilation.
 - Service all fans and filters regularly to ensure they are properly maintained.

- Chutes and Skips:
 - Securely cover skips.
 - Minimise drop heights to control the fall of materials.
 - Regularly damp down surfaces with water.
- Waste Disposal/Burning:
 - Previous Government best-practice documents¹⁷ state that under the Clean Air Act 1993, bonfires are not recommended on site and if unavoidable, they should be supervised at all times. However, it is recognised across London that local authorities prefer to set conditions that prevent any bonfires on site. Taking into account the Clean Air Act 1993 and nuisance legislation (Environmental Protection Act 1990), this Best Practice Guidance recommends that:
 - There will be no burning of any material is permitted on site.
 - All excess material should not be wasted, but used or safely removed from site according to appropriate legislation.
- Dealing with spillages:
 - The use bunded areas wherever practicable.
 - Regularly inspect the site area for spillages.
 - Have spillage kits readily available.
 - Clean spillages using agreed wet handling methods.
 - Vacuum or sweep regularly to prevent the build-up of fine waste dust material, which is spilled on the site and is designated as waste that is no longer fit for use should be dealt with in accordance with the Waste Management Licensing Regulations (WMLR), 1994.
 - Inform the Environment Agency, London Fire and Emergency Planning Authority (LFEPA) or the Health Protection Agency (HPA) if harmful substances are spilled.
- Emission Controls for vehicles and plant measures:
 - On-road vehicles:
 - Developers can voluntarily apply tighter emission standards to their vehicles even if a low emission zone is implemented in 2008. This arrangement could be of benefit at sensitive locations and aid negotiations with the local planning authority (LPA) regarding operations on site.
- Site Monitoring Measures:
 - Site monitoring protocols:
 - Employ best practice methods at all times.
 - Take into account the impact of air quality and dust on occupational exposure standards to minimise worker exposure and breaches of air quality objectives that may occur outside the site boundary, such as by visual assessment.
 - Keep an accurate log of complaints from the public.

- Determine the prevailing wind direction across the site using data from a nearby weather station. Permanent weather stations are only operated at few locations in and around London. Ideally a minimum of 12 months data should be used.
 - If measuring along a transect:
 - Set up a transect across the site according to the direction of the prevailing wind.
 - Operate a minimum of two automatic particulate monitors to measure PM10 levels at either end of the transect - either inside or outside the site boundary. These instruments should provide data that can be downloaded in real-time by the local authority.
 - If monitoring at sensitive receptors:
 - Identify which location(s) need to be monitored and set up an automatic particulate monitor at each of these to measure representative PM10 levels. These instruments should provide data that can be downloaded in real-time by the local authority.
 - If relevant, supplement monitoring with hand held monitors to get on the spot readings at selected points, such as close to sensitive receptors.
 - Consider also monitoring dust deposition and soiling rates as these can be used to indicate nuisance.
- Measures to be implanted to control noise from on-site construction activities:
 - Screening:
 - Building near to sensitive adjoining properties early in the construction programme can help to screen and contain noise from later construction work. Permanent fences or barriers that are part of the final design, as well as boundary hoardings and site huts, can also act as acoustic screens, especially if there are no gaps.
 - Simple purpose-built screens and enclosures:
 - Materials such as plywood or chipboard panels can be lined with sound-absorbing material such as mineral wool to create noise containing screens or enclosures. The length of the barrier should be greater than its height. The noise source should not be visible and the barrier located as close as possible to either the source or the receiver.
 - Simple portable screens, located very close together, can effectively reduce the effects of noisy work in small areas on site, including jack hammering or plate compaction.
 - Design details of acoustic screens, enclosures and sheds can be implemented into the scheme to control noise pollution.
 - Concrete pouring:
 - Concrete pouring shall be carried out between the hours of 08:00 and after 18:00, Mondays to Fridays and 08:00 till 13:00 hours on Saturdays, No work to be carried out on Sundays. The noise from concrete pumps is likely to

cause complaints from nearby residential sites when the neighbourhood. The use of accelerants and heaters will also be considered to reduce setting times. Concrete pumping should be located away from sensitive boundaries.

○ Breaking of concrete:

- The use of traditional rock breakers attached to excavators is one of the most common causes of noise complaints, especially if it takes place on or near to a common or shared wall of an occupied building. Measures on site will be taken to use equipment that breaks concrete by crushing it rather than drilling through it. Furthermore, before works start adjoining properties will be notified in advance. Hydraulic and chemical expansion methods are less noisy methods which will be considered by the main contractor.

○ Site Monitoring:

- The site manager, supervisor and traffic marshal will look out for engines left idling when not in use, noisy mufflers on plant and noisy site radios. We are to make sure that unnecessary metallic impact noise is avoided from dropping scaffolding poles, placement of roading plates and moving metal fencing.
- The site manager is to ensure that machines are maintained regularly – they will be quieter. Simple maintenance can reduce noise levels by as much as 50 per cent in most cases. A method to check noise problems is when workers having to shout at arms – length to converse. This will indicate that the noise level may be above 90 dBA at that location.

○ Noise reduction with distance:

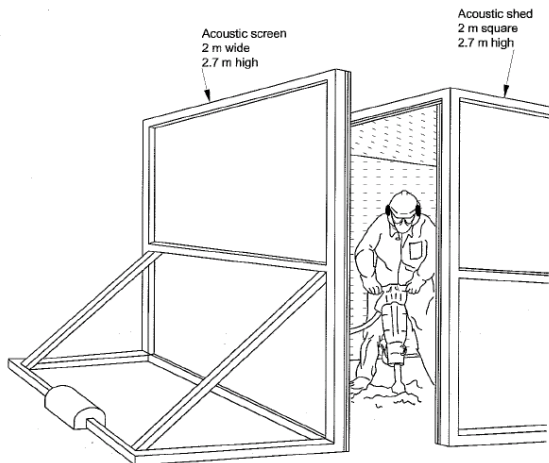
- Move static plant and equipment as far as possible from sensitive boundaries, as works allows. A distance of four times further away lowers the noise by 12 dBA. A reduction of 10 dBA will sound half as loud.

○ Plant and Machinery:

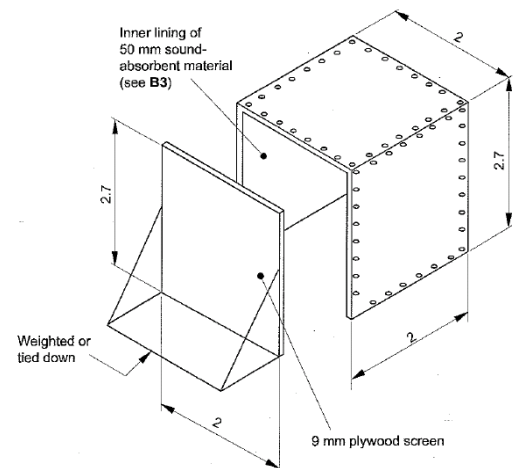
- Quiet plant and machines are available which are specifically designed to produce less noise. Examples are muffled breakers (the noise of a typical silenced breaker can be reduced by 16 dBA if a purpose-made muffler is fitted) and silenced diesel generators and compressors (some units are up to 15 dBA quieter). Generally, electrically powered equipment such as chain saws and cranes are noticeably quieter than diesel-powered equipment and hydraulically powered equipment is quieter than pneumatic power.
- Cutting metal using gas cutters is far less noisy than using grinding methods to dismantle metal structures. When replacing exhaust and intake mufflers, a quieter option will be picked which are often available.
- Similarly, specified plant and equipment such as excavators can also operate at very different noise levels. Taking into consideration, the lowest sound power level (shown as PWL or SWL) marking when workers are buying or

hiring plant equipment. A 10 dBA lower SWL or PWL rated-level will sound approximately half as loud.

- Keep machinery covers and panels closed and well-fitted. Bolts and fasteners should be done up tightly to avoid rattles. Avoid equipment that is either over or under powered.
- Saw cutting of pavers and pavement slabs:
 - A cutting station will be established with the saw enclosed in an acoustic enclosure. A simple screen is unlikely to be effective in city streets due to reflected noise effects. A water supply will be made available and the saw blade changed regularly to avoid an annoying high pitch “whining” noise from developing.
- For any saw cutting:
 - The work men on site will be encouraged to choose a saw blade with the greatest number of teeth and of the smallest width. Furthermore, a choice of blade with gullets as small as possible. Choose a blade with built in vibration dampening slots.
- Examples of Screening Methods:
 - These diagrams below show acoustic screen/shed to control/reduce noise pollution.



Typical Acoustic Shed



Open-sided Shed with Screen

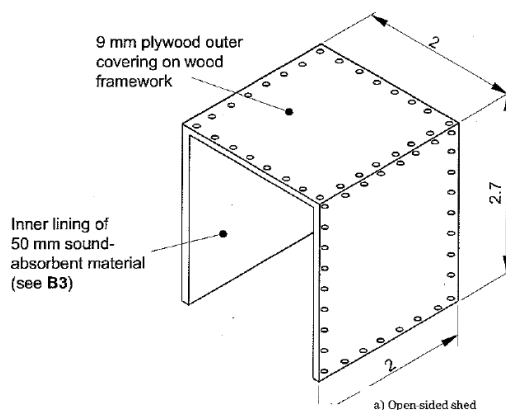


Table B.4 Measured sound reduction given by types of partial enclosure

Type of enclosure (see figure B.3)	Reduction dB(A)		
	Facing the opening(s)	Sideways	Facing rear of shed
Open-sided shed lined with absorbent material; no screen	1	9	14
Open-sided shed lined with absorbent material; with reflecting screen in front	10	6	8
Open-sided shed lined with absorbent material; with absorbent screen in front	10	10	10

All construction activity will be carried out in conjunction with the above, which will have a high level of control to the amount of air pollution released. This will result to a few amount of vehicles required on site as oppose of carrying out the development which requires parking and activity spaces. Construction vehicles will be controlled by the traffic marshal/banks man who will summon them on request from the site manager as various stages to the project are complete.

3.0 SEQUENCE OF WORKS

In respect, given the scale of the project the works will be managed and controlled by a site manager which will carry the works in short phases in order to allow for construction vehicles a safe and efficient transport to and from the building. All works to be undertaken with the agreement of the Local Authority Planning Officer.

No building works to be undertaken without approval/consent of Local Authority planning department.

Construction Method Statement to be read in conjunction with; construction phase Health & Safety plan and proposed floor plans.

3.1 SITE INSPECTION & SURVEYS CARRIED OUT

- Full site inspection to be carried out by the site manager to appoint the necessary contractors to carry out the relevant surveys before construction commences.
- Structural Engineer to coordinate with soil inspection team to confirm the correct foundation required for the build.

3.2 NEW CONSTRUCTION

- New construction to follow approved proposed layout drawings.
- New partitioning to be proprietary metal studs with facing plasterboard and skim finish. Design and construction to achieve minimum requirements for fire-protection and sound resistance where possible.
- All new windows and full height glazed sheets or screens to be carefully handled and managed by the workers.

4.0 ACCESS ARRANGEMENTS & DELIVERIES / COLLECTIONS

- Site workers who are excepting deliveries/collections on site will be responsible to sign for their materials and give the delivery notes to the traffic marshal/banks man personnel who is on site hours that will be filed.
- Deliveries/collections to take place between 08.00am – 16:00pm Monday to Friday during site operating hours within the site driveway.
- All vehicles for deliveries and collections to park in the driveway which the traffic marshal/banks man personnel will allow and the immediately to leave the site once the duty has been complete.
- In regards to new electric head connections will be installed within the site boundaries.
- No loading/unloading to take place overhead over the pedestrian footpath. Loading and unloading will be take place strictly in the designated areas on the site driveway.

4.1 PARKING OF VEHICLES

- No visitor or site operative vehicles are to enter the site to park their vehicle. Site visitors and personnel shall not park on site nor on the public highway. Site operatives will be allocated one space to park reference: **ABP-RR102-37-CMP-1**. Both Site visitors or personnel vehicles are to park in parking bays close to the site. No vehicle shall be parked on the driveway at any one time.

4.2 STORAGE OF MATERIALS & PLANT

- All materials and plant to be stored within the curtilage of the building.
- Materials to be covered and stored within the building with protected flooring. (Refer to plan: 'ABP-RR102-37-CMP-1').
- Deliveries to be sequenced in order to minimise on-site storage.
- No large plant anticipated for the works. Any excavation is to be undertaken by hand in accordance with SHE guidance and safe working methods.

4.3 SECURITY HOARDINGS

- Security hoarding will be required during the duration of the works predominantly on the site boundary line of the site.
- Adequate contact information and details displays for public viewing duration the works. No other advertisements are allowed to be illustrated on the hoarding to comply with the local authority requirement.

5.0 SITE WASTE

- Where possible, site waste to be minimised and materials and designs managed in order to minimise wastage onsite. Any additional construction materials to be retained and re-used on subsequent sites.
- Following review with Environment Agency mapping data, the site is not known to be on contaminated land. Therefore, waste management as follows:
 - Soil / garden waste – to be reused on site as fill in order to level existing ground and general landscaping.
 - Plasterboard – gypsum based segregated on site and returned for recycling.
 - Recycling to British Gypsum Plasterboard Recycling Service Team
 - Metals – segregated on site and sent for recycling locally.
 - Scrap / recycling to waste carrier registered with Reading Borough Council Thames Licensing Department.
 - Timber – any timber to be sent locally for recycling
 - Kennet Weir Business Park, Arrowhead Road, Theale, RG7 4AE
 - Any other inert waste to be reused as compacted hardcore on site, as appropriate.