SECTION 9: ENVIRONMENTAL AND WASTE MANAGEMENT

Contents

TW issued their first Environment Strategy in 2021 as a key step towards helping to tackle the environmental crisis. The strategy sets out ambitious targets to cut TW's environmental footprint, reduce emissions and waste, conserve precious resources and regenerate the natural environment wherever possible on developments. The three pillars of the Environment Strategy are:

Climate Change – reducing operational carbon emissions intensity by 36% by 2025 and reducing carbon emissions intensity from the supply chain and customer homes by 24% by 2030.

Nature – Increasing natural habitats by 10% on new sites from 2023 and including priority wildlife enhancements from 2021.

Resources and Waste – Cutting waste intensity by 15% by 2025, using more recycled materials and publishing a towards zero waste strategy for sites by 2022.

An understanding of what approaches can be taken during site delivery, to enhance sites and the surrounding environment, is critical in meeting and surpassing the Environment Strategy targets. Where relevant, site enhancement recommendations and good practice guidance to support the Environment Strategy are provided in this section.

Climate Change and the Environment Strategy

Target: Reduce operational energy intensity for UK sites by 32% and operational carbon emissions intensity by 36% by 2025; reduce supply chain carbon emission intensity by 24% and emissions from customer homes in use by 75% by 2030.

Delivering our targets and minimising the impact we have on the environment to create greener, healthier homes for all, requires changes to all aspects of the way we work. These involve:

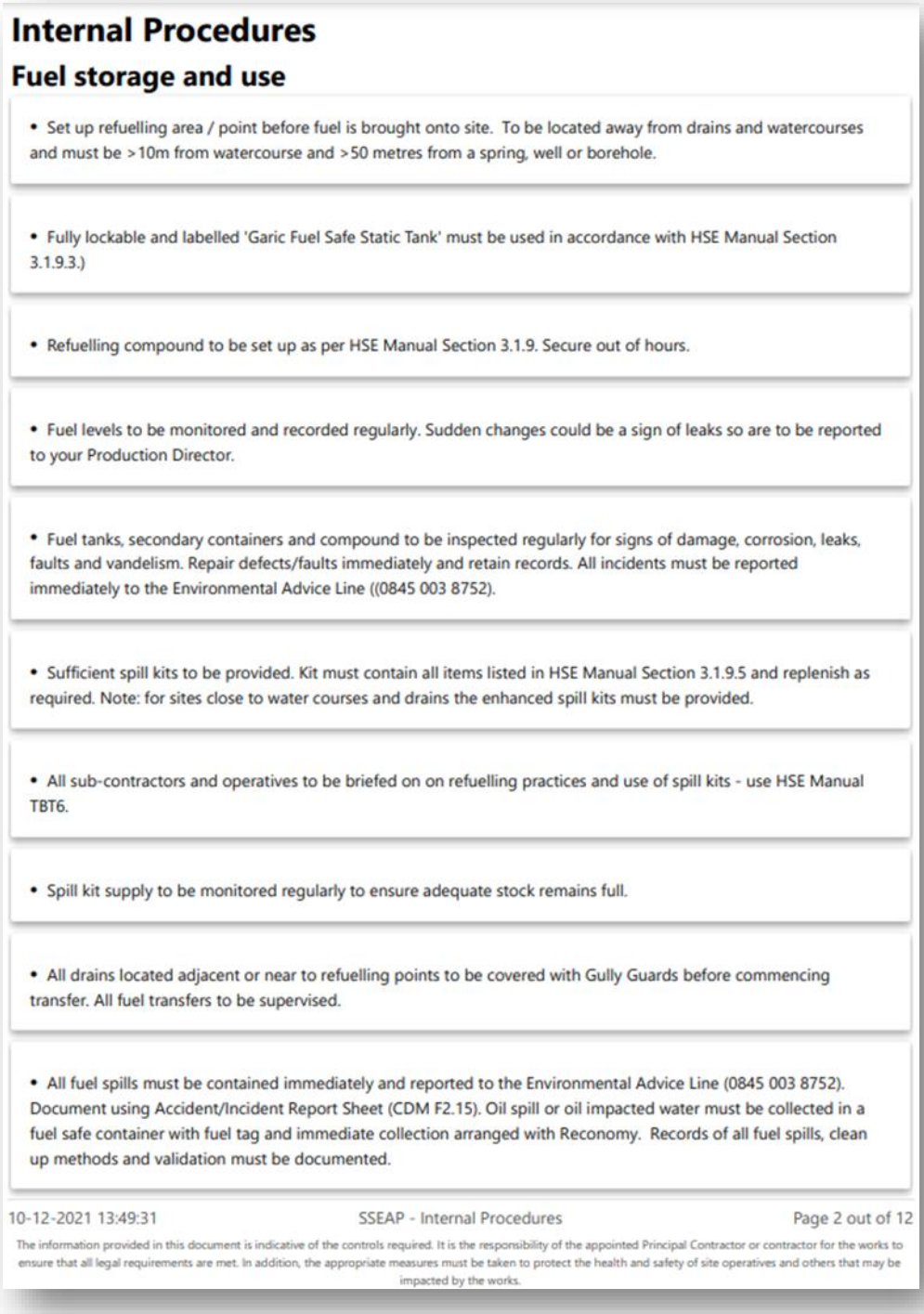
- Following Waste Do's and Don'ts to minimise waste disposal to landfill.
- Re-using material on site wherever possible.
- Improving energy efficiency of plant and welfare on site.
- Minimising water consumption and improving silt management.
- Working with local suppliers to reduce delivery journeys.
- Undertaking design measures to enhance biodiversity on site.

9.1 ENVIRONMENTAL DOCUMENTS

9.1.1 SITE SPECIFIC ENVIRONMENTAL ACTION PLAN (SSEAP)

A Site-Specific Environmental Action Plan (SSEAP) assists the awareness and control of any potential environmental impact of TW's activities on site. A copy of the SSEAP must be held as part of the Construction HSE Plan (Folder 1, F1.5). A SSEAP is available on all sites and used by Site Management Team to review and monitor the environmental management controls required throughout the construction process. The SSEAP:

- identifies the site's **Sensitive Receptors** (e.g. watercourses, protected species, TPOs etc.);
- identifies relevant **Environmental Risk Activities** (e.g. demolition, storage of hazardous materials etc.);
- identifies on-site **Environmental Risk Materials** (e.g. existing contamination, fuel, etc.); and
- outlines the **Possible Impacts** from the activities and materials above (e.g. refuelling could result in contamination of the ground);
- details the **Controls** to be adopted to manage the environmental aspects of the site; and
- highlights **the Responsibilities** for actions, e.g. Site Contractor or operative.



Internal Procedures

Fuel storage and use

- Set up refuelling area / point before fuel is brought onto site. To be located away from drains and watercourses and must be >10m from watercourse and >50 metres from a spring, well or borehole.
- Fully lockable and labelled 'Garic Fuel Safe Static Tank' must be used in accordance with HSE Manual Section 3.1.9.3.)
- Refuelling compound to be set up as per HSE Manual Section 3.1.9. Secure out of hours.
- Fuel levels to be monitored and recorded regularly. Sudden changes could be a sign of leaks so are to be reported to your Production Director.
- Fuel tanks, secondary containers and compound to be inspected regularly for signs of damage, corrosion, leaks, faults and vandelism. Repair defects/faults immediately and retain records. All incidents must be reported immediately to the Environmental Advice Line ((0845 003 8752).
- Sufficient spill kits to be provided. Kit must contain all items listed in HSE Manual Section 3.1.9.5 and replenish as required. Note: for sites close to water courses and drains the enhanced spill kits must be provided.
- All sub-contractors and operatives to be briefed on on refuelling practices and use of spill kits - use HSE Manual TBT6.
- Spill kit supply to be monitored regularly to ensure adequate stock remains full.
- All drains located adjacent or near to refuelling points to be covered with Gully Guards before commencing transfer. All fuel transfers to be supervised.
- All fuel spills must be contained immediately and reported to the Environmental Advice Line (0845 003 8752). Document using Accident/Incident Report Sheet (CDM F2.15). Oil spill or oil impacted water must be collected in a fuel safe container with fuel tag and immediate collection arranged with Reconomy. Records of all fuel spills, clean up methods and validation must be documented.

10-12-2021 13:49:31 SSEAP - Internal Procedures Page 2 out of 12

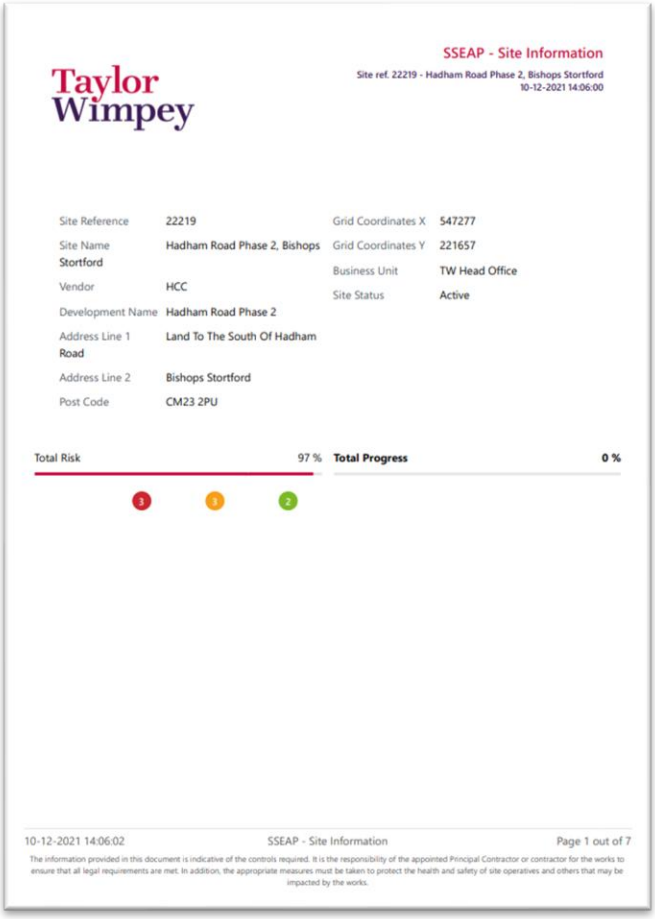
The information provided in this document is indicative of the controls required. It is the responsibility of the appointed Principal Contractor or contractor for the works to ensure that all legal requirements are met. In addition, the appropriate measures must be taken to protect the health and safety of site operatives and others that may be impacted by the works.

The Site Manager must discuss the **SSEAP** with their Site Management Team, Contractors and Operatives prior to works commencing on any activity with an Environmental risk and clarify the appropriate action to be taken and by whom (particularly the groundworkers).

All SSEAP reports are generated from TW's Land and Environment Assessment of Development Risk (LEADR) management system.

9.1.2 SSEAP REPORTS

The key SSEAP reports that can be referred to when briefing contractors / operatives on site are:



Taylor Wimpey

SSEAP - Site Information

Site ref. 22219 - Hadham Road Phase 2, Bishops Stortford
10-12-2021 14:06:00

Site Reference	22219	Grid Coordinates X	547277
Site Name	Hadham Road Phase 2, Bishops Stortford	Grid Coordinates Y	221657
Vendor	HCC	Business Unit	TW Head Office
Development Name	Hadham Road Phase 2	Site Status	Active
Address Line 1	Land To The South Of Hadham Road		
Address Line 2	Bishops Stortford		
Post Code	CM23 2PU		

Total Risk 97 % **Total Progress** **0 %**

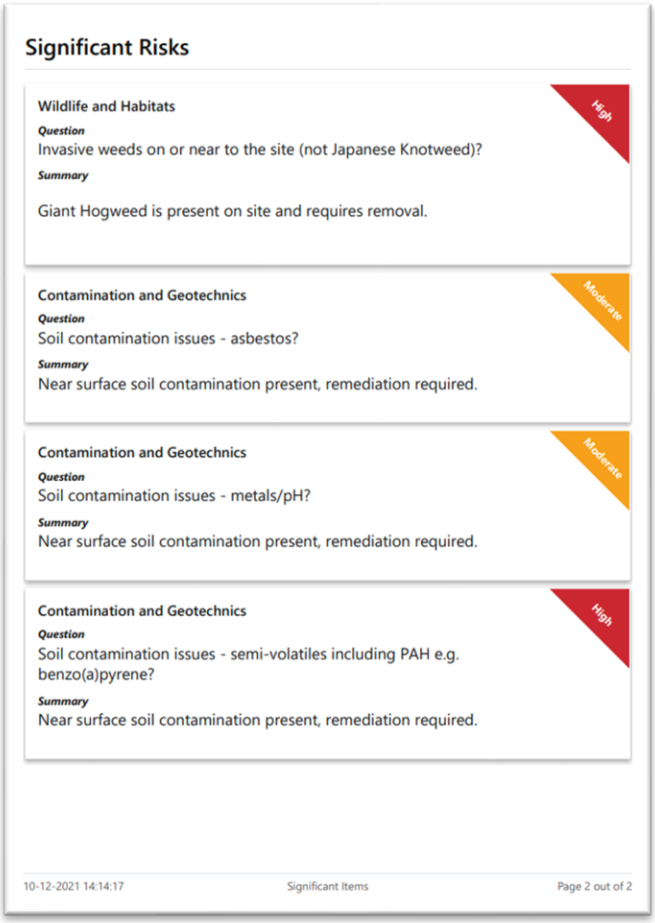
3 3 2

10-12-2021 14:06:02 SSEAP - Site Information Page 1 out of 7

The information provided in this document is indicative of the controls required. It is the responsibility of the appointed Principal Contractor or contractor for the works to ensure that all legal requirements are met. In addition, the appropriate measures must be taken to protect the health and safety of site operatives and others that may be impacted by the works.

SSEAP - Site Information:

This document details the nature of the site and key information such as site access and boundaries, planning and licence information, e.g. working hours, etc.



Significant Risks

Wildlife and Habitats — High

Question
Invasive weeds on or near to the site (not Japanese Knotweed)?

Summary
Giant Hogweed is present on site and requires removal.

Contamination and Geotechnics — Moderate

Question
Soil contamination issues - asbestos?

Summary
Near surface soil contamination present, remediation required.

Contamination and Geotechnics — Moderate

Question
Soil contamination issues - metals/pH?

Summary
Near surface soil contamination present, remediation required.

Contamination and Geotechnics — High

Question
Soil contamination issues - semi-volatiles including PAH e.g. benzo(a)pyrene?

Summary
Near surface soil contamination present, remediation required.

10-12-2021 14:14:17 Significant Items Page 2 out of 2

Significant Items Report:

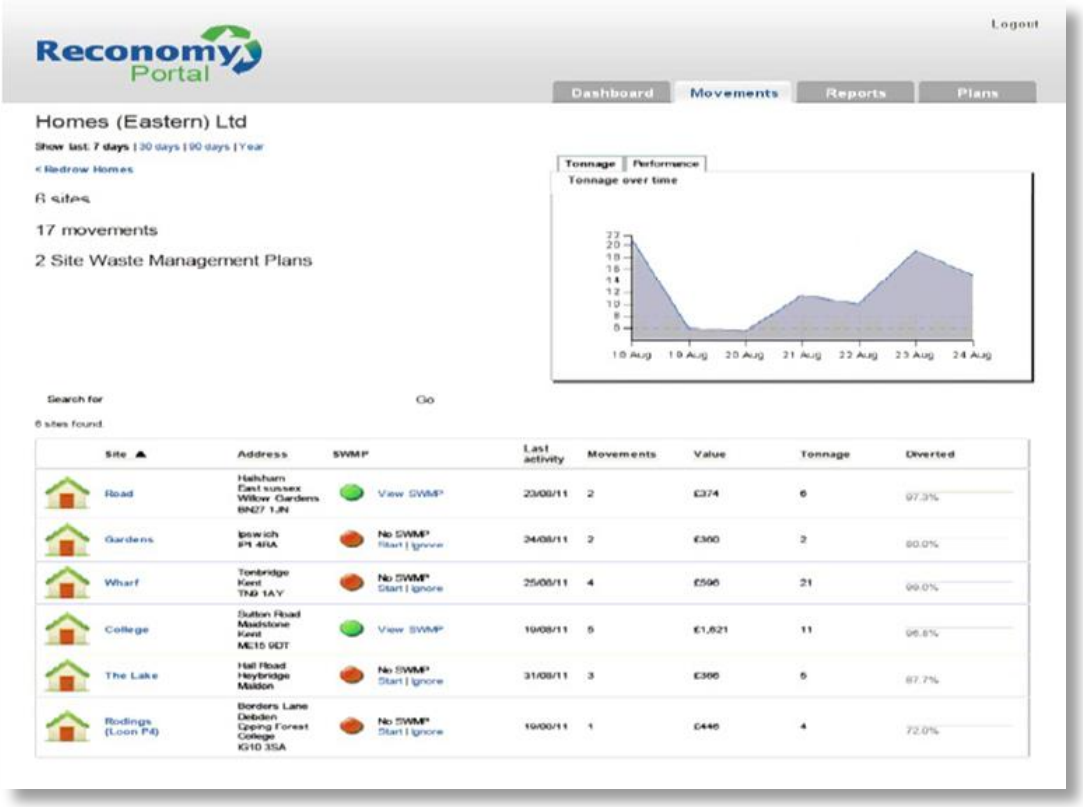
This is a summary of the:

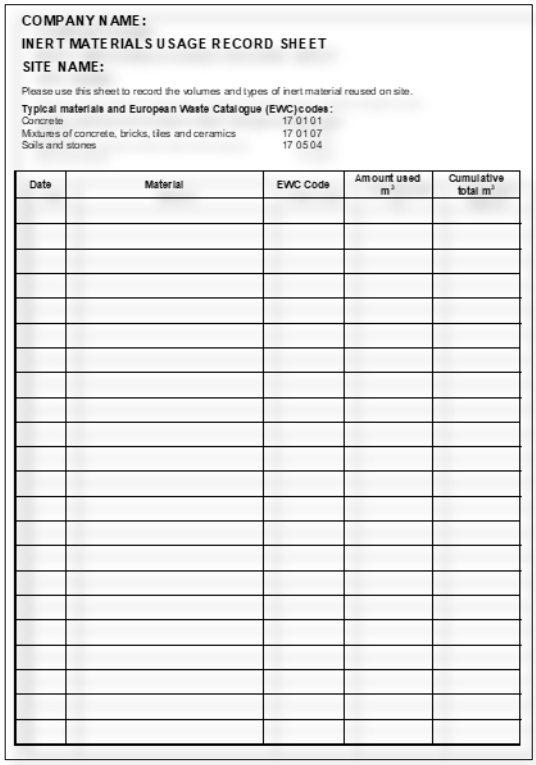
- Significant Receptors e.g. adjacent residential properties.
- Activities and their Potential Impact
- e.g. generation of dust, noise from piling etc.; and
- Environmental Risk Materials
- e.g. fuel.

Items identified and listed in this report require control measures on site and must be closely monitored and controlled

9.1.3 THE SITE WASTE MANAGEMENT PLAN

The Commercial Team provides a copy of the Site Waste Management Plan (SWMP) for your site before any works commence. They develop and maintain the SWMP through the progress of the site.





COMPANY NAME:

INERT MATERIALS USAGE RECORD SHEET

SITE NAME:

Please use this sheet to record the volumes and types of inert material reused on site.

Typical materials and European Waste Catalogue (EWC) codes:

Concrete	17 01 01
Mixtures of concrete, bricks, tiles and ceramics	17 01 07
Soils and stones	17 05 04

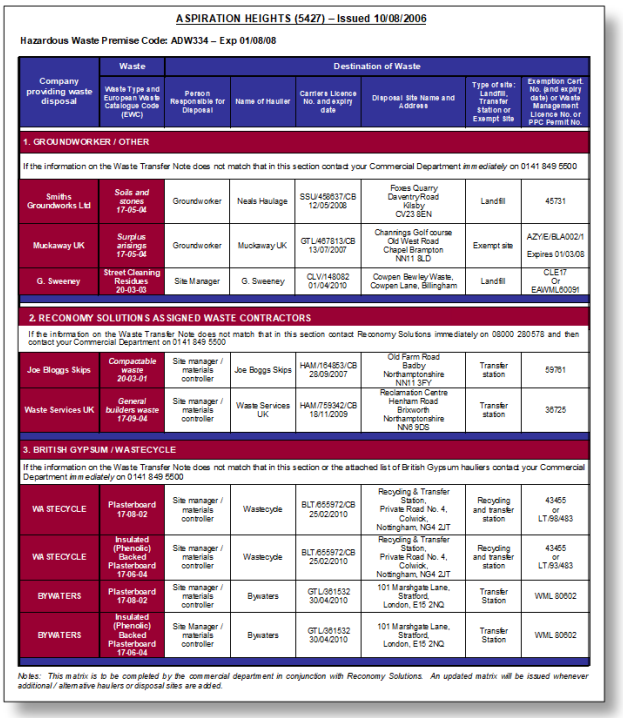
Date	Material	EWC Code	Amount used m^3	Cumulative total m^3

The SWMP details the waste streams that are produced on site, the estimated quantities of waste that are expected to be produced and how they are managed (i.e. reused, recycled, disposed of offsite etc.).
To maintain the SWMP, the Site Manager:

- records all inert material used on site, e.g. under roads, etc. using the Inert Materials Usage Record Sheet, Construction HSE Plan - Folder 2, F2.25;
- collects the waste transfer notes received from all waste carriers including British Gypsum; and
- assists the Commercial Team in the quarterly review of the SWMP.

9.1.4 THE SITE WASTE MANAGEMENT MATRIX

A Site Waste Management Matrix (Construction HSE Plan – Folder 3, F3.9) must be provided at site start by the Commercial Team. It lists all approved waste carriers for your site, their respective licence numbers and what types of waste they are permitted to take from your site. All waste streams are listed. You must not permit any materials to be removed from site if any of the information is unavailable or is inconsistent with the Site Waste Management Matrix.



ASPIRATION HEIGHTS (5427) – Issued 10/08/2006

Hazardous Waste Premise Code: ADW334 – Exp 01/08/08

Company providing waste disposal	Waste	Destination of Waste					
	Waste Type and European Waste Catalogue Code (EWC)	Person Responsible for Disposal	Name of Hauler	Carriers Licence No. and expiry date	Disposal Site Name and Address	Type of site: Landfill, Transfer Station or Exempt Site	Exemption Cert. No. and expiry date) or Waste Management Licence No. or PPC Permit No.
1. GROUNDWORKER / OTHER							
If the information on the Waste Transfer Note does not match that in this section contact your Commercial Department *immediately* on 0141 849 5500							
Smiths Groundworks Ltd	Soils and stones 17-05-04	Groundworker	Neals Haulage	SSU/458637/CB 12/05/2008	Foxes Quarry Daventry/Road Kilsby CV23 8EN	Landfill	45731
Muckaway UK	Surplus arisings 17-05-04	Groundworker	Muckaway UK	GTL/457813/CB 13/07/2007	Channings Golf course Old West Road Chapel Brampton NN11 8LD	Exempt site	AZYE/BLA002/1 Expires 01/03/08
G. Sweeney	Street Cleaning Residues 20-03-03	Site Manager	G. Sweeney	CLV/148082 01/04/2010	Cowpen Bewley Waste, Cowpen Lane, Billingham	Landfill	CLE17 Q/ EAWML60091
2. RECONOMY SOLUTIONS ASSIGNED WASTE CONTRACTORS							
If the information on the Waste Transfer Note does not match that in this section contact Reconomy Solutions immediately on 08000 280578 and then contact your Commercial Department on 0141 849 5500							
Joe Bloggs Skips	Compactable waste 20-03-01	Site manager / materials controller	Joe Boggs Skips	HAM/164863/CB 28/09/2007	Old Farm Road Badby Northamptonshire NN11 3FY	Transfer station	59761
Waste Services UK	General builders waste 17-09-04	Site manager / materials controller	Waste Services UK	HAM/759342/CB 18/11/2009	Reclamation Centre Henham Road Brixworth Northamptonshire NN6 9DS	Transfer station	36725
3. BRITISH GYPSUM / WASTECYCLE							
If the information on the Waste Transfer Note does not match that in this section or the attached list of British Gypsum hauliers contact your Commercial Department *immediately* on 0141 849 5500							
WASTECYCLE	Plasterboard 17-08-02	Site manager / materials controller	Wastecycle	BLT/655972/CB 25/02/2010	Recycling & Transfer Station, Private Road No. 4, Colwick, Nottingham, NG4 2JT	Recycling and transfer station	43455 or LT/98/483
WASTECYCLE	Insulated (Phenolic) Backed Plasterboard 17-06-04	Site manager / materials controller	Wastecycle	BLT/655972/CB 25/02/2010	Recycling & Transfer Station, Private Road No. 4, Colwick, Nottingham, NG4 2JT	Recycling and transfer station	43455 or LT/93/483
BYWATERS	Plasterboard 17-08-02	Site manager / materials controller	Bywaters	GTL/361532 30/04/2010	101 Marshgate Lane, Stratford, London, E15 2NQ	Transfer Station	WML 80602
BYWATERS	Insulated (Phenolic) Backed Plasterboard 17-06-04	Site Manager / materials controller	Bywaters	GTL/361532 30/04/2010	101 Marshgate Lane, Stratford, London, E15 2NQ	Transfer Station	WML 80602

Notes: This matrix is to be completed by the commercial department in conjunction with Reconomy Solutions. An updated matrix will be issued whenever additional / alternative hauliers or disposal sites are added.

Note: Road Sweeping Contractors must be included – they may appear in Section 1 if appointed by the Groundworks Contractor. They must not be permitted to empty loads (unless arrangements have been made for a holding area). Details of a suitable holding area can be obtained from RSK Advice Line, telephone: 0845 0038752 (dedicated TW line)). The Sweeping Contractor must provide waste transfer notes.

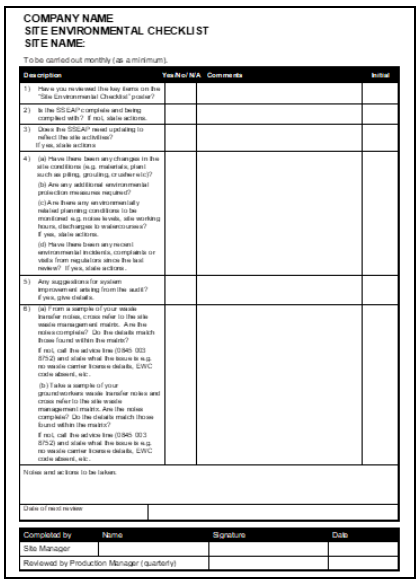
Contact your Production Director if:

- You have not been provided with the Waste Management Matrix;
- if any material to be removed from the site is not included on the matrix; or
- if details of carriers or receiving sites shown on Duty of Care documents differ from the information contained on the matrix.

9.2 MONITORING AND DEALING WITH ENVIRONMENTAL INCIDENTS

For general background, see Site Safe Briefing: Energy Efficiency (Site Safe Briefing Folder).

9.2.1 MONITORING ENVIRONMENTAL ASPECTS OF THE SITE



COMPANY NAME
SITE ENVIRONMENTAL CHECKLIST
SITE NAME:

To be carried out monthly (as a minimum).

Description	Yes/No/ N/A	Comments	Initial
1) Have you reviewed the key items on the "Site Environmental Checklist" poster?			
2) Is the SSEAP complete and being complied with? If not, state actions.			
3) Does the SSEAP need updating to reflect the site activities? If yes, state actions.			
4) (a) Have there been any changes in the site conditions (e.g. materials, plant such as piling, grouting, crusher etc)? (b) Are any additional environmental protection measures required? (c) Are there any environmentally related planning conditions to be monitored e.g. noise levels, site working hours, discharges to watercourses? If yes, state actions. (d) Have there been any recent environmental incidents, complaints or visits from regulators since the last review? If yes, state actions.			
5) Any suggestions for system improvement arising from the audit? If yes, give details.			
6) (a) From a sample of your waste transfer notes, cross refer to the site waste management matrix. Are the notes complete? Do the details match those found within the matrix? If not, call the advice line (0845 003 8752) and state what the issue is e.g. no waste carrier license details, EWC code absent, etc. (b) Take a sample of your ground/artificial waste transfer notes and cross refer to the site waste management matrix. Are the notes complete? Do the details match those found within the matrix? If not, call the advice line (0845 003 8752) and state what the issue is e.g. no waste carrier license details, EWC code absent, etc.			
Notes and actions to be taken.			
Date of next review			

Completed by	Name	Signature	Date
Site Manager			
Reviewed by Production Manager (quarterly)			

Site Environmental Checklist (Construction HSE Plan - Folder 2, F2.16, for use by the Site Management Team, is intended as a regular review of the Site-Specific Environmental Action Plan (SSEAP) (see section 9.1.1) and a check that adequate control measures are in place and being maintained.

The review period is set to reflect the sensitivity of the site; however, a monthly review must be carried out as a minimum

Note: If the site is noted as of high sensitivity (e.g. due to protected species or complex remediation requirements, etc.), you may need to increase the frequency of the review. This must be agreed with the Production Director/Manager at site start.

If you require further assistance, contact your Production Manager or the **Taylor Wimpey Environmental Advice / Incident Line 0845 003 8752**.

9.2.2 REPORTING ENVIRONMENTAL INCIDENTS

All environmental incidents on site (or within the scope of the overall works) must be reported via the Environmental Advice / Incident Line. The Advice Line can also be used to obtain general advice to prevent any incidents from occurring. If you are uncertain of how to proceed on any environmental matter, call the advice line.

TW Environmental Advice / Incident Line 0845 003 8752
to be used for ALL Environmental Incidents

The incident line is manned day and night by our environmental advisors (RSK). They provide advice on immediate response, and information to manage the incident over the phone. An environmental advisor may need to visit the site to evaluate the situation, provide further guidance on managing the response to an incident, and support and advise the Site Management Team or BU, especially during dealings with any Environmental Regulator.

9.2.2.1 ENVIRONMENTAL INCIDENT CATERGORIES

MAJOR	Obvious immediate risk to receptors – specialist advice required
MEDIUM	No immediate threat to receptors – specialist advice required
MINOR	Dealt with by site
ADVICE	Advice only

It is of the utmost importance that you report all environmental incidents that occur both on site and within our scope of works. Some examples of incidents that must be reported are:

- reporting of silt management issues on site or silt run-off from site;
- reporting of burning on site;
- complaints from site neighbours due to statutory nuisance, e.g. dust, noise etc;
- discovery of unexpected contamination, including asbestos within the soils;
- issues associated with waste disposal arrangements, e.g. difference between waste matrix and waste transfer note on site;
- reporting of a spill of oil from a generator or from a vehicle etc.; and
- involvement of the Environmental Agency or Environmental Health Department, etc.

See Site Safe Briefing: Dealing with Environmental Incidents (Site Safe Briefing Folder).

9.2.2.2 SPILL RESPONSE (e.g. Fuels)

In order to minimise the risk of contaminating surface or groundwater, all spillages on site must be responded to immediately and reported to the **TW Environmental Advice / Incident Line 0845 003 8752** (see section 9.2.2).

If a spillage has occurred:

- **assess the hazard** and, if necessary, evacuate all personnel not directly involved in dealing with the spillage (e.g. where mass volumes of fuel have spilled / tank rupture);
- **take action to contain the spillage**, taking into account any dangers associated with the spill;
- **take action to prevent further spillage,** if safe to do so;
- once contained, **contact the TW Environmental Advice / Incident Line 0845 003 8752** for further advice on action to be taken or further advice needed;
- in some cases the environmental regulator, e.g. the Environment Agency, must be informed. Guidance on this is provided by the Environmental Advice / Incident Line.

- Spill kits are available on site, usually located next to refuelling areas. Spill kits consist of oil absorbing sheets, booms and absorbent granules (see Section 2.5.5 Provision and Use of Spill Kits for detailed description of spill kit contents);
- contaminated materials must be bagged appropriately, labelled as hazardous waste and segregated from the usual waste streams on site for collection by a licensed hazardous waste carrier; Reconomy Solutions or your other approved Waste Contractor can advise;

9.3 ONGOING MANAGEMENT OF ENVIRONMENTAL ASPECTS

9.3.1 ENVIRONMENTAL IMPACTS - STATUTORY NUISANCE

Statutory nuisances are issues that affect members of the public (e.g. construction dust or noise) or their property (e.g. vibration). These can generate a significant number of resident/neighbour complaints. Your SSEAP identifies any sensitive receptors, e.g. local residents, and details the mitigation measures that are necessary to minimise the impact of the site works.

9.3.1.1 NOISE

Noise can be a health and safety issue as well as an environmental one. Operative-related health and safety issues associated with noise are covered in section 3.6.3.

Noise must be kept to a minimum on site. However, some particularly noisy activities may be necessary e.g. crushing during demolition, piling, etc. In this situation, the Technical Team may need to obtain a consent from the Local Authority permitting increased noise levels within a defined time frame. The Consent may have conditions attached which affect the operations, e.g.:

- restriction of working hours; and
- noise mitigation measures to be adopted. Affected contractors and operatives must be made aware of and agree to the measures.

Other measures can be used to minimise noise:

- use generators that include noise reduction features;
- avoid leaving generators running overnight (except where necessary for providing welfare to security or for servicing the drying room;
- avoid locating noisy plant and equipment near sensitive receptors where possible; and
- consider using a noise scrEen, e.g. placed next to the source or the receiver (see below).

9.3.1.2 EMISSIONS

Exhaust emissions from plant and machinery can be a nuisance, particularly black or dark smoke. Minimise this by ensuring contractors maintain their plant to reduce emissions and prevent the emission of black smoke. Where possible any mobile or fixed plant that emit exhaust fumes, position them as far away as is possible from site boundaries / occupied areas.

9.3.1.3 DUST

Dust can be generated throughout the year but is a potentially greater nuisance in dry weather, e.g. soil / vehicle movements.

Dust can be minimised by:

- sheeting soil/ground stockpiles;
- sheeting lorries 'mucking' on and off site;
- road sweeping soil impacted roads;

- Using water sprays to damp down roads and stockpiles;

- using water cannons to damp down large areas, e.g. demolition; and

- use of dust fencing, particularly near occupied homes

In most situations a quick visual inspection of adjacent homes, cars, windows, etc. can identify if dust is becoming a nuisance.

The Site Manager must review with their Site Management Teams, Contractors and Operatives the need to ensure that further issues such as silt run off are not caused by excessive water use (see section 9.3.5)

9.3.1.4 VIBRATION

Generally, people are 'very sensitive receptors' in relation to the type of activity that generates both noise and vibration.

Vibration from activities such as demolition or piling activities on site may be perceived by those within close proximity of the development (residents and businesses), as being a major issue.

Local residents and businesses must be consulted prior to such works commencing to ensure that these groups are made aware of the issues and to confirm that mitigation measures are in place.

Where extensive vibration is anticipated, the consultation exercise must include documenting the condition of nearby properties prior to works commencing.

Where complaints are received directly to the site or TWUK, the Environmental Advice / Incident Line (0845 003 8752) must be contacted to ensure that the BU is made aware and corrective action is taken.

9.3.1.5 OTHER POTENTIAL STATUTORY NUISANCES

Other forms of statutory nuisance that must be considered for managing site are:

- Light pollution: the use of bright lights e.g. security lights can cause disturbance to neighbours and wildlife. If identified as an issue, then controls such as screening, directional lighting, etc to be considered to minimise the impact;
- Insects/vermin: untidy sites e.g. excessive rubbish or standing water around the site can lead to an increase in vermin and could create a nuisance. Good housekeeping and site working practice helps control this; and
- Odour: smells from sewerage e.g. blockages to storm water storage tanks or issues with sewage pumping stations, etc. if not dealt with quickly can cause the generation of bad smells. Early identification and maintenance to restore correct functioning minimises the impact.

Energy Management and the Environment Strategy

Target: Reduce operational energy intensity for UK sites by 32% and operational carbon emissions intensity by 36% by 2025.

Improving energy efficiency on our sites reduces our carbon footprint and provides a better working environment.

- Inspect generators regularly and place in well ventilated areas.
- Install 'hush pods' to reduce generator noise.
- Retrofit site cabins with energy saving measures (insulation, heating timers).
- Ensure appliances are PAT tested and unused equipment is switched off.

9.3.2 WASTE MANAGEMENT

Waste management and disposal is a costly and highly regulated environmental issue.

TW has a Duty of Care to apply the principals of the Waste Hierarchy. The key is to first and foremost follow good material management and eliminate or reduce the production of waste products as much as possible.

Note: No burning of waste is permitted on site

Much of the material we class as waste could possibly be re-stocked or re-used on site, rather than simply sending off site as waste, e.g. timber off-cuts. See Site Safe Briefing: Waste Management and Segregation (Site Safe Briefing Folder).

9.3.2.1 WASTE CLASSIFICATION

HAZARDOUS WASTE	NON-HAZARDOUS WASTE
Aerosols (e.g. expanded foam cans)	Part-Full Water Based Paint Tins
Part-Full Solvent Based Paint Tins	Empty Paint Tins
Part-Full Mastic Tubes or Cut Off Tips	Empty Mastic Tubes (Tips removed)
Part-Full Grip-Fill Tubes or Cut Off Tips	Empty Grip-Fill Tubes (Tips removed)
Gas Cartridges	Empty Terrain Liquid Weld Tubes
Expanded Foam Cans (full or empty)	Timber
Part-Full Terrain Liquid Weld Tubes	Cable
Used spill kit materials (contaminated with oil)	Packaging (plastic and cardboard)
Broken/ faulty fluorescent tubes / long life bulbs	Metal (e.g. pipe)
	Bricks

All sites produce hazardous waste (called 'special waste' in Scotland). However, during TW normal build, the amounts are small.
If you are unsure which category a particular waste is hazardous or non-hazardous, contact the Environmental Advice / Incident Line (0845 003 8752).

9.3.2.2 DEALING WITH HAZARDOUS WASTE

Generally, materials with a hazard symbol on the packaging are likely to be considered as hazardous waste if being disposed of.

Note: empty containers may be regarded as non-hazardous waste, such as empty paint tins and empty mastic tubes (tips carrying residue removed).

Hazardous waste:

- must be segregated on site and not mixed with other wastes;
- must not be placed in general waste container, e.g. RELs, FELs in builder's skip; and
- containers used for hazardous waste items, e.g. mastic tips.

- Mastic tips removed from mastic tubes.

- Hazardous waste containers specific to site production of hazardous waste.

As part of our waste management control, contractors are encouraged to use part-full paint tins and mastic tubes on subsequent plots.

9.3.2.3 REMOVAL OF HAZARDOUS WASTE FROM SITE

Before hazardous (special) wastes can be removed from site, details of what makes the waste hazardous, e.g. the particular chemical and its concentration, must be provided to the Waste Contractor. This process is managed through the Commercial Department (or the Technical Department in relation to contaminated soils).

9.3.2.4 STORAGE OF HAZARDOUS SUBSTANCES

Hazardous materials must always be stored, handled and disposed of in accordance with their COSHH assessments (see section 3.2.2.5)

C01 **BRICKLEEN**
COSHH ASSESSMENT AND KEY CONTROL MEASURES

«Fldmrgcompanyname»
SITE NAME: «Fldmrgsitename»

Brickleen Cementone Mortar Clean Descaler / Brickleen B021 — Risk Rating: L

Normal Use	Key Risks	Control Measures	Emergency Procedures	Storage/Disposal
• Proprietary acid product for cleaning brick externally.	• Corrosive irritant – do not allow to come in contact with skin or enter eyes / mouth. • Hazardous if inhaled.	• Follow manufacturer's instructions shown on packaging. • Wear goggles and waterproof gloves/clothing. • Avoid splashing people. • Keep hazard data sheet on site.	• Ingestion: Do not induce vomiting. Give plenty of water in sips. • Eye: Irrigate with water for at least 15 minutes. • Skin: Wash with soap/cleanser and rinse with plenty water. • If spilt, dilute with water.	• Dispose of full or partly full containers, or spills as **hazardous waste.** • Liquid products should be bunded and disposed of by a licensed waste transporter. • Dispose of empty containers as **non-hazardous.**

(If not adequate for activity – further control measures or project specific safety method statements required.)

Name: Signature:
Date:

Storage:

- store away from watercourses and drains and in a contained or bunded area;
- store in an area away from traffic or risk from impact;
- store in a locked area, preferably located away from the site boundary; and
- label all containers and seal when not in use (with containers checked regularly for signs of damage and leakage).

Usage:

- drums containing liquid must be placed in drip trays when used on site;
- only the amount required for a particular job to be taken to the place of work; and
- containers must remain closed when not in use and returned to the material store at the end of the day.

Disposal:

- the COSHH assessment details how to dispose of empty / damaged or old containers; and
- Material Safety Data Sheets (MSDS) which are compliant with the REACH regulations can be used to assess waste disposal options. If in doubt, contact the products supplier or TW Environmental Advice / Incident Line 0845 003 8752.

9.3.2.5 CEMENT, CONCRETE AND GROUT

These materials can be highly alkaline and have the potential to cause a significant environmental impact. Care must be taken with these materials to prevent the pollution of any groundwater, drains, etc

Mortar silo arrangements are outlined in the site set up (see section 2.6). Wash out water from concrete mixing plant, ready mix concrete lorries and equipment washings must be discharged into a designated area (e.g. footings) away from drains and surface waters to allow the water to filter into the ground. If restricted space prevents the discharge on clear ground for filtering then the washings may need to be held in a suitable container to allow the cement, etc. to settle and allow a discharge.

Surplus dry concrete, cement and grout can be used as inert rubble or disposed of as inert waste when reuse is not possible

9.3.2.6 DOCUMENTATION FOR TRANSFER AND WATE DISPOSAL


PART A Notification Details

PART B Description of waste

PART C Carrier's certificate

PART D Consignor / Holders certificate

Hazardous / Special Waste: A Hazardous Waste Consignment Note is required for each individual load.


INVOICE NO. 80381

DUTY OF CARE: CONTROLLED WASTE TRANSFER NOTE

E. TAYLOR SKIP HIRE & RECYCLING LTD

LEICESTER ROAD · HINCKLEY · LEICESTERSHIRE · LE10 3DR

Tel: 01455 250856 Fax: 01455 618064 www.etaylorskiphire.co.uk

PRODUCER / HIRER / CUSTOMER SIC code: 41.202

Name and Delivery/Invoice Address: Taylor Wimpey, Hurst Road, Leicester Order Number Pete

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the waste (England & Wales) Regulation 2011

Signed on behalf of customer: Print: Date: 31 / 10 / 12 Time: am/pm

DESCRIPTION OF WASTE

Type of Waste	EWC Code	✓	Size of Skip	Del	Ex	Col
Mixed	170904		Mini			
Soil	170504		Midi			
Hardcore	170107		L. Midi			
Wood ✓	170201		Maxi ✓		✓	
Green	020103		12/14/16 Yard			
Household	200301		20 Yard			
Scrap	170407		35 Yard			
Other			Other			

Driver Name · Reg Number · Gross · Tare · Net

WASTE CARRIER

E Taylor Skip Hire & Recycling Ltd, Leicester Road, Hinckley, Leicestershire, LE10 3DR

Waste Carrier Registration Number: BLT/660338/CB

Issued by the Environment Agency

Signed on behalf of carrier: Print: Date: 31 / 10 / 12 Time: am/pm

TRANSFER / DISPOSAL

E Taylor Recycling Transfer Station · Other

CASH SALES: Net · VAT · TOTAL · Account · Cash · Cheque · Card · None · Not Payed

Please call within the required time when the skip is ready for collection on 01455 250856. For full Terms and Conditions see overleaf

Non-hazardous Waste:

A Duty of Care Waste Transfer Note is required. Your approved Waste Contractor must complete the documentation for all general construction wastes and your sub-contractor for site arisings they are removing from site. Refer to your Site Waste Management Matrix (see section 9.1.4)

9.3.2.7 GENERAL WASTE CONTAINERS (Non-hazardous)

Supplier
Reconomy Solutions Ltd Telephone: 08000 280578 (dedicated TW line) Fax: 01952 236611 Operations: Orders, Call offs, Account management and Customer care

Best practice is to use RELs (rear end loader) and FELs (front end loader), limiting the use of costly builders' skips. (Use of builder's skips must be authorised by the Production Director).

Rear End Loader (REL)

Front End Loader (FEL)

Ensure RELs/FELs are completely full prior to removal (closed skips enable a greater volume of waste to be loaded). Overweight charges are cheaper than extra collections! Avoid nil collections by managing your site collection schedules - a fee is still applied to these (even if no waste removed).

9.3.2.8 WASTE SEGREGATION AREA / SIGNAGE PACKS

Appropriate signage must be used on site to identify to operatives what material is permitted in each container.

Your waste segregation area must be set up: close to the site compound.

- with adequate hardstanding for all of the waste containers.
- unobstructed access for telehandler and waste removal vehicles; and
- Regularly check skips for contamination, e.g. by Hazardous waste – aerosols, etc.

- Local Charities may collect segregated wood waste for a nominal fee. They must be licensed by the Local Authority. Check with your Commercial department

- Local scrap metal merchants may collect segregated metal waste at no charge

9.3.3 PLOT SURPLUS MATERIAL (REDUCING WASTE

9.3.3.1 COST EFFECTIVE REMOVAL

- Inert material (bricks, blocks, clay pipes, roof tiles, ceramics) – stockpile and remove via Grab Wagon or other container to benefit from lower disposal costs. If other wastes, e.g. plastic sheeting, gets mixed in, it may not be possible to have the material removed as inert.

- Compactable Active Waste – Use REL or FEL (e.g. paper, card, polythene, packaging, and wood, plastic, MDF off-cuts less than 600mm in length)

- Plasterboard Waste – Use British Gypsum Dumpy Bags / designated skips

- Timber and Metal wastes should be segregated for subsequent removal wherever possible. Note: Chipboard / MDF are not classified as timber for waste purposes and should always be kept separate from timber wastes Treated timber may also need to be segregated from untreated.

Should you need further assistance in identifying ways to maximise waste segregation or minimise waste production on site, contact your Production Manager or regional Reconomy Solutions or other approved Waste Contractor contact.

9.3.4 USE OF MATERIALS

9.3.4.1 EFFICIENT USE OF MATERIALS

Storage

Poor or inadequate material storage contributes significantly to waste generation on site. When storing material always remember:

- provide adequate storage that is weatherproof and secure, such as a lean-to. Ensure materials such as timber, bricks, etc are stored off the ground; and
- protect lightweight materials from wind.

Good practice

- Use only the quantity of materials necessary and avoid wastage of materials.
- Ensure that only enough material is ordered or taken to your place of work from storage to complete the job in hand.
- Encourage operatives to use off-cuts and where possible incorporate into the next phase of the works (e.g. next plot).
- Reuse surplus materials where possible.
- Make arrangements with suppliers to take back surplus materials and packaging or pallets to reduce waste sent to landfill.
- Review Plot Surplus Material flowchart (see section 9.3.3).

9.3.4.2 SITE ARISINGS (e.g. Excavated Spoil)

The Land and Planning or Commercial department are responsible for confirming whether site-excavated soils are to be reused on the site, on another TW site or elsewhere and whether they are classified as waste or a product. Without this confirmation, you must not commence with the off-site re-use or disposal of site excavated materials. If there is any doubt, contact your Production Manager or RSK.

If there is a need to remove from, or import soil to, your site. RSK or the relevant appointed environmental consultant must be contacted to visit site and check and confirm that:

- The relevant Material Management Plan (MMP) is in place;
- The correct licenses / soil transfer documentation is in place;
- The Contractors transfer documentation is suitable and sufficient; and
- The Site Management Team is fully aware of the controls to be in place and monitored / managed during the soil transfer

Where your site arisings have been designated for re-use under an MMP this is developed by the Technical Department. Where appropriate i.e. soil transfer, you must be given a copy of the MMP by the Technical Department and must follow the steps within it. If you have any queries, contact your Technical Department or RSK.

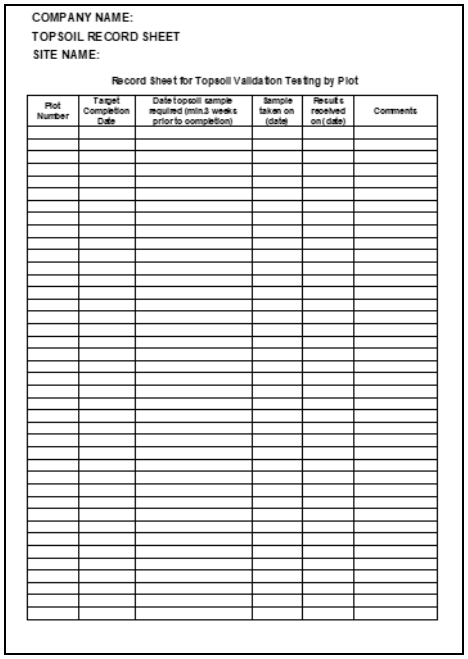
Any remediation works involving specialist techniques (including use of a crusher) may be required to operate under a Mobile Treatment Permit (England and Wales) / Mobile Plant Licence (Scotland). No work is permitted on site without confirming with the Commercial, Production or Technical Departments that the permit / licence and associated paperwork is in place for the specific activity. If there is any doubt, contact your Commercial / Production Manager.

If you are unsure, discuss site arisings with your Production Manager / Production Director / Technical Department or call the TW Environmental Advice / Incident Line (0845 003 8752).

9.3.4.3 TOPSOIL TESTING

TW has a standard policy for the testing of topsoil on all sites, especially when imported. Details must have been provided to you at the Pre-Start meeting. If details have not been passed to you, contact the Technical team for guidance.

To enable soil arisings to be appropriately classified, soil analysis may need to be carried out. Contact your Technical Department who must either have these details already or will arrange this on your behalf prior to disposal.



COMPANY NAME:
TOPSOIL RECORD SHEET
SITE NAME:

Record Sheet for Topsoil Validation Testing by Plot

Plot Number	Target Completion Date	Date topsoil sample required (min3 weeks prior to completion)	Sample taken on (date)	Results received on (date)	Comments

Record results of testing on the topsoil record sheet for each plot on the Topsoil Record Sheet (Construction HSE Plan - Folder 2, F2.17), noting the following:

- The plot number;
- The target completion date for that plot;
- The date the topsoil sample is required, which must be at least 3 weeks prior to completion; and
- The date when the sample was taken.

File results in Construction HSE Plan - Folder 2.17

Imported soils

Copies of Certificates of Quality for all imported soils must be kept on site. These are filed in the Construction HSE Plan - Folder 2.17. Contact your Production Manager if copies have not been forwarded to site.

A Materials Management Plan (MMP) may be in place for topsoil imports from another TW site and you must have been provided with a copy of the MMP. Contact your Technical Department if you have any queries.

9.3.4.4 TOPSOIL / STOCKPILE MANAGEMENT / STORAGE

Materials must be managed and stored on site to prevent silt run-off, and nuisance dust. The following measures must be employed:

- minimise excessive stockpiling – phase works and where possible have just-in-time soil deliveries;
- locate soil stockpiles away from watercourses, ditches and drains and on level ground;
- contaminated materials must be stockpiled on an impermeable surface e.g. on tarmac in a bunded area at least 10m from a watercourse/drain;
- cover stockpiles of contaminated material to prevent run off. Any contaminated run-off must be collected, and disposal arranged via your waste broker;
- cover/damp down stockpiles in warm weather to prevent nuisance dust; and
- stockpile height to be less than the height of the site boundary to reduce exposure to wind, etc.

Silt management is covered in further detail in section 9.3.5.

Waste and the Environment Strategy

Target: Cut waste intensity by 15% by 2025. Reduce single-use plastics and move towards more sustainable products.

General waste:

- Clear and robust waste segregation systems are key to minimising landfill waste.
- Utilise local licenced recycling centres wherever possible.
- Specifying pre-cut materials with suppliers also reduces off-cut waste and the overall volume of materials present on site.
- Always follow the Waste Do's and Don'ts.

Soil re-use:

- Subsoils are unlikely to be classified as inert waste and should be reused on site wherever possible, reducing disposal costs and waste volumes sent to landfill.
- Contaminated ground can be re-used on site under the right conditions, protecting potential receptors and reducing off-site disposal of hazardous and non-hazardous waste.

9.3.5 SILT / WATER MANAGEMENT

9.3.5.1 SILT MANAGEMENT

Silt can be a problem on sites, particularly in adverse weather conditions such as heavy rainfall which causes it to be mobilised and enter drains, watercourses or to pool on site, development roads, public highways, etc. This is made worse at times of the year when the ground is already saturated and items, such as leaf litter blocking drains or watercourses, e.g. in the autumn months.

This section outlines measures that must be considered, dependent on the circumstances / conditions of the site and particularly where significant silt run-off / discharge could potentially be an issue and where there are sensitive receptors nearby such as, watercourses.

Silt is a pollutant and can kill fish, cause flooding, block drains, etc. Sites must be managed to minimise the risk of silt pollution.

Consider:

site topography / drainage plan:

- Are there any watercourses within or close to the site, where are they located?
- Are there existing drainage systems installed at site and do you know where they discharge to?
- Do you have a detailed drainage plan, and do you know where site surface water discharges to?

- Do you have knowledge of the measure's other consortium or joint venture partners are taking? Could these impact on the management of your site?

on and off-site receptors (potentially sensitive to silt run-off and transfer of mud)

- on/ off-site watercourses, drainage ditches;
- access roads, public highways, customer driveways;
- Public Right of Ways; and
- sensitive adjacent land uses, e.g. existing residential, fish farm, nature reserve.

control of the works consider:

- the impact of enabling works, especially installation of site drainage; and
- the impact of soil stripping, muck shifting, etc.

Result of Terram (Drains) not maintained

Excessive/unnecessary soil strip

9.3.5.2 SILT RUN-OFF PREVENTION MEASURES

The following silt run-off prevention measures must be considered and implemented where necessary on all active areas of the site to protect sensitive receptors. These are already set out in the Site-Specific Environmental Action Plan (SSEAP) (see section 9.1.1). However, changing site conditions necessitate regular reviews of the adequacy of agreed silt management measures.

Initial Phase of enabling / preparatory earthworks

- Provision of a road sweeper on site and adjacent road network during periods of inclement weather (to be continually assessed by Site Management).
- Minimise the stripping of topsoil on site to areas only required for the implementation of drainage and earthworks on a phased basis as the development progresses.
- Retention of vegetation in areas not identified for construction until a later phase.

Construction Phase

In addition to the above measures, the following must also be considered and utilised during construction works where necessary to protect identified sensitive receptors.

- Batter back soil stockpiles (or sheet if necessary).
- Site soil stockpiles away from rivers and drains.

- Placement of gully guards (or standard protection, e.g. straw and terram) in all gullies during construction and inspected, replaced / cleaned when necessary
- Avoid tracking or washing out next to surface waters.
- In hot weather, avoid using too much water to suppress dust.

Protected drain using a 'Gully Guard' (Forest Drainage Products, Stardens Works, Tewkesbury Road, Newent, Gloucestershire GL18 1LGTel: 01531 828960)

- Protected drain using Terram

- Road end protected with straw bales

- Minimise, where possible, the movement of plant on and off roads to prevent the tracking of excess soil onto roads and highways.
- Construction of speed ramps to slow traffic down can also be used to help direct surface water to collection areas.
- Placement of topsoil at the earliest opportunity to control surface run-off from completed plots / areas.
- General good housekeeping on site roads and regular monitoring of control measures e.g. regular cleaning of gully bags / protection.

- In more severe cases, the Technical / Design Team may specify the installation of silt fencing. This solution is used to control silt run-off into watercourses or onto roads where significant run-off is anticipated or identified. The silt fence must be cleaned regularly and after any build-up from heavy rain to ensure effectiveness.

9.3.5.3 'NON-ACTIVE' ZONES OF THE SITE

Protection measures that can be considered on non-active areas / sections of the site to protect sensitive receptors include:

- maintain grassed / vegetation cover of the areas of site which are not due to be developed during the current calendar year. Note: this requires management to prevent the establishment of an ecological habitat; and
- minimise the movement of any plant cover within these areas / sections of the site to reduce disturbance of existing surface cover.

9.3.5.4 GENERAL

The use of the TW Environmental Advice / Incident Line 0845 003 8752 or calls to the appointed Environmental Consultant must be made if you are concerned that current controls are not proving to adequately control silt run-off / discharge, or you are dealing with a large amount of silty water that needs to be pumped or is causing issues on site.

You must have an environmental permit/discharge consent (that includes the build phase) to discharge silty water to drains, surface waters and ground water. See section 9.3.5.7 Site Environmental Issues and Controls for more details.

- Temporary discharge of clean water to rivers and streams does not normally need an environmental permit/discharge consent. See section 9.3.5.7 Site Environmental Issues and Controls for more details.
- In Scotland, if you comply with certain specified conditions, a discharge can be covered by a General Binding Rule and SEPA do not need to be contacted. See section 9.3.5.7 Site Environmental Issues and Controls for more details.
- Consents granted for your site need to be fully understood by the whole Site Management Team, contractors and operatives involved to ensure that adequate control is maintained to meet the conditions of the Consent.
- Ensure site campaign material, specifically 'Silt Run-off prevention and protection', is displayed prominently.
- Deliver a toolbox talk to your groundworkers to raise awareness of silt management.
- Site Safe Briefing: Silt Management (Site Safe Briefing Folder)
- Monitoring of controls / site conditions must be carried out on a regular basis by the site team and their groundworks contractor, including:
  - regular inspection of all gully protection, silt fencing, etc.;
  - inspection and management of temporary discharge control areas to ensure they are not blocked or over-filled; and
  - inspection of adjacent surface water streams on a weekly basis and daily during periods of heavy rainfall.
- A record of the checks and actions taken must be maintained, particularly as mitigation in the event of an incident / visit from an Enforcing Authority.

9.3.5.5 ROAD SWEEPERS

General road sweeping residues are classified as non-hazardous waste. However, if contaminated with oil, e.g. after a spill, they need to be classified as hazardous waste. Road sweepers are contracted on a site-by-site basis and in many cases the sweeper may clean several third-party sites in addition to TWs in any one working day

To ensure that Taylor Wimpey complies with its Waste 'Duty of Care' when employing road-sweeping contractors on site, the Site Manager must:

- check that section 3 of the Site Waste Management Matrix records the details of any road sweeping contractor employed on site (if not, contact your Commercial Department). Note: if the road-sweeper has been provided by the Groundworks Contractor, the details are found in Section 1 of the Matrix.
- ensure that road sweepers do not clean up after spills on site. (If a spill has occurred, contaminated material must be collected and disposed of separately as a hazardous waste);
- ensure that regular sweepers never empty loads on our sites unless arrangements have been made to have a suitable 'holding area' set up (RSK can assist with the design and detailing - telephone: 0845 0038752 (dedicated TW line). If road sweepings are inadvertently discharged on site, these must be disposed of appropriately; and
- where there is no suitable 'holding area', confirm that sweepers leave the site with their load intact and have received a fully completed waste transfer note from the driver.

9.3.5.6 EXCAVATIONS AND DEWATERING

Water generated by dewatering excavations is normally be heavily laden with silt and must therefore be treated prior to any discharge to drain or surface water. The simplest solution may be to pump the water to a grassy area of the site to allow natural filtration to remove the silt. However careful control and supervision is required to ensure that the area does not become saturated causing silt laden water to simply flow across the ground surface. This may result in an uncontrolled discharge to a drain or surface water

Where possible the dewatering pump must switch off before the last portion of water is removed as this is likely to contain the highest levels of silt.

General

- You must allow suspended solids to settle out of silty water before it is discharged, e.g. by filtering through straw bales or silt trap. See section 9.3.5.2 Silt Management.
- Water from contaminated sites or that is suspected to be contaminated (e.g. odour, sheen, colour) must be tested before pumping commences (contact the TW Environmental Advice / Incident Line 0845 003 8752 if unsure of the action necessary). Contaminated water may need to be treated or disposed of off-site.
- You must understand what activities/works are covered by any environmental permits or discharge consents obtained for your site. Ask the Technical department for assistance / advice.
- You must fully understand the conditions put in place under the permit or consent before the activities/works re-commence.

9.3.5.7 CONDITIONS ATTACHED TO ENVIRONMENTAL PERMITS OR DISCHARGE CONSENT

ENGLAND AND WALES

You must have an environmental permit (discharge consent) to discharge water from excavations unless the discharge is temporary (i.e. for less than 3 months) and meets all of the following criteria:

- discharge is made to a surface water (a river, stream or the sea);
- discharge will not pollute the surface water or adversely affect aquatic life, e.g. silt pollution;
- discharge location is not within, or less than 500 metres upstream of a European Conservation site (river or coastal) or SSSI (Site of Special Scientific Interest), or within a site designated for nature conservation – your Technical Department will advise,
- discharge will not lead to flooding; and
- discharge will not cause erosion of the banks or bed of the surface water.

Contact the **TW Environmental Advice / Incident Line 0845 003 8752** if you are unsure or cannot meet these requirements.

SCOTLAND

SEPA has General Binding Rules (GBRs) that can allow the dewatering of excavations and subsequent discharge of water without a discharge permit provided the following conditions are met:

- any water removed from the excavation is discharged to a surface water drainage system;
- where groundwater flow rates are high (e.g. in areas of sands and gravels and sandstone) water can only be removed from the site for up to 5 days within any 180 day period;
- where groundwater flow rates are low (e.g. in areas of silts and clays) water can only be removed from the site for up to 180 days;
- groundwater cannot be removed from excavations within 250m of a wetland or an abstraction used for any purpose other than dewatering (e.g. drinking water borehole);
- suspended solids must be filtered/settled out prior to discharge (e.g. via a silt trap, straw bales or settlement pond);
- contaminated water cannot be discharged; and discharge must be managed to prevent damage / erosion to the banks or the bed of the receiving river or stream, e.g. control of flow rate.

Your Technical Team will advise whether your discharge meets the requirements of the GBR or if a permit is required.

9.3.5.8 SILT BUSTERS

If the relatively inexpensive solutions described above is assessed as insufficient to control off-site discharges of silt, Silt Busters can be used to treat outflows prior to discharge. These devices provide a mobile silt trap that separates the suspended solids from the water. Contact your technical team or TW Environmental Advice / Incident Line 0845 003 8752 if you think one may be required on site.

9.3.5.9 SEWAGE PUMPING STATIONS

Sewage Pumping Stations normally are maintained for a minimum of 12 months before they can be adopted by the local sewerage undertaker / Water Company. This means you may still be developing a site where TW have responsibility for the ongoing maintenance of the pumping station. The Technical Department have the overall responsibility for the management of Pumping Stations awaiting adoption and they need to ensure a service contract is in place with a reputable Maintenance Contractor

You must be provided with details of the appointed Maintenance Contractor if you are still working on the site. This is in the form of a BU Sewage Pumping Station (SPS) Tracker. [see next page].

Sewage Pumping Stations (SPS) Tracker

Business Unit:				**Technical Director:**			
List of all BU's unadopted SPS [Address including Postcode]	Details of the maintenance contract in place [Name / Contact details]	Provisions within Service Contract e.g. Routine Maintenance / inspection visits / provision of inspection maintenance records and reactive call-outs.	Details of stakeholders informed with regards to reactive call-outs. Reactive call-out response time reviewed and noted below.	Emergency contact number [SPS Maintenance Contractor] issued to those listed below [list emergency number]	Date of last review of maintenance / inspection report from SPS maintenance contractor [inc. date / comments / actions]	If consortium development – responsibility established for initial and on-going inspections maintenance and remedial works [detail responsibility and contact details]	Date of last meeting / correspondence with water company re progress towards adoption [inc. date / comments / actions]

TW (11/05/15) Sewage Pumping Station (SPS) Tracker page 1 of 1

If you become aware of issues with the Pumping Station or receive complaints, these must be passed on immediately to the Maintenance Contractor and the Technical Department. The Maintenance Contractor must take overall responsibility for the ongoing management of the Pumping Station, including emergency callouts.

9.3.5.10 PERMEABLE PAVING

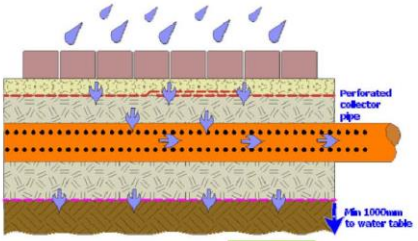
Water that falls on the permeable paving enters the drainage system carrying any chemical, silt or solvent in the water. Site Management must take steps to ensure that the area is kept clear of contaminants, including silt run off, temporary storage of contaminating material, etc.

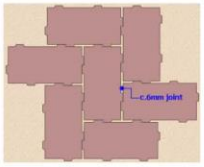
Permeable Paving and the Environment

An information sheet for site teams

Taylor Wimpey

Please consider that as water falls on the permeable paving, it will enter the drainage system under-ground. In time the water will end up in a swale, ditch course or water course. Any chemical, silt or solvent in the water, will be poisonous to the environment. Please help keep the paving operational by following the simple care procedures listed below.





Please take care to:

- Keep the joints clear from becoming clogged.
- Clean down with clean water only.
- Be watchful for possible contaminants.
- Avoid temporary storage of materials on the paving, like cement, top soil and sand.
- Ensure adjacent development land is not spilling wet silt run off onto the paving.
- Consider the environment.

CPL © CDM 28.08.14

9.3.5.11 SITES AT RISK OF FLOODING

Flooding can be caused in a number of ways and some locations are more sensitive to the risk of flooding than others. The risk of flooding at a site must have been assessed by the Technical Department. If you are working on a site which has been identified as at a higher risk of flooding this must have been included in the Site-Specific Environmental Action Plan (SSEAP) (see section 9.1.1).

Site Managers working on sites which have been identified as being at a higher risk of flooding caused by a site's close proximity to the coast or a watercourse must sign up for Flood Alerts and Flood Warnings from the Environment Agency, Natural Resources Wales or SEPA. Registration is simple and the alerts/warnings can be sent via text and/or email to your TW phone and email address. Alerts indicate that flooding is possible, and warnings are given when flooding is expected.

During periods of intense rainfall or large storms you must ensure the water levels are monitored to provide an early warning of raising levels likely to cause flooding. Even sites not located close to a watercourse or the coast must monitor the effect of intense rainfall across the site in case of any failures to the site surface water drainage, such as it being blocked or becoming overwhelmed with the volume of water which can also lead to flooding.

If you receive a Flooding Warning that indicates flooding on site, undertake flood defence actions, e.g. deploy sandbags, and manage materials to limit potential damage caused.

Silt/Water Management and the Environment Strategy

Target: Reduce operational mains water intensity by 10% by 2025. Install water butts for 20,000 customer households in water stressed regions by 2025.

Effective silt management protects surface water quality at our sites:

- Employ multiple protection measure techniques (gully guards, settlement tanks and silt busters) in strategic locations to manage water and silt efficiently.
- Undertake regular environmental testing of silt to allow for cost-effective waste disposal.

Managing water consumption:

- Designate a site 'water champion' to track and report water usage.
- Report and fix leaks and dripping taps promptly and minimise use of sprinklers.
- Install water efficiency options (hose trigger controls, low flow taps, water meters, sustainable drainage systems) and reuse water on site, e.g., water butts on unsold plots.

9.3.6 CONTAMINATED LAND

9.3.6.1 GROUND REMEDIATION

Remediation works are likely to have been initiated and completed prior to the construction phase commencing. However, there are occasions when remediation continues into the construction phase or is initiated if further contamination is discovered. Remediation works which are progressing in advance on the construction phase of the site is documented in your SSEAP. If further contamination has been discovered, it may be necessary to update your SSEAP is completed by the Technical Department.

Any remediation works is normally carried out by a specialist ground remediation contractor.

If you need further information regarding the ground remediation on your site, contact your Production Manager / Director. Other sources of information are available such as the Remediation Statement for the site.

9.3.6.2 GAS MEMBRANES

Depending on the ground, gases can be present in soils beneath a site. There may be a requirement to include Ground Gas Protection as part of a development. The specific requirements for gas protection measures are identified by the Technical Department who must communicate the requirements to you. The Site Manager and Installation Contractor must both hold a copy of the manufacturer's specification for the membrane and instructions for installation.

If ground gas protection measures are not adequately employed, the key areas of a property where ground gases can enter a property are through wall cavities, gaps around services and construction joints.

The potential hazards associated with gas ingress to properties include:

- asphyxiation of people in the property, with the potential to cause loss of life;
- chronic diseases associated with long term exposure to various vapours/ground gases, for example carcinogens; and
- explosion within the property, causing damage, injury and potentially loss of life.

It must also be noted that if gas membranes are not installed correctly, the local authority may not discharge relevant planning conditions / warrants, which can affect progress of the development.

Inspection of the installed gas protection system

On sites where low levels of Ground Gas Protection (known as Amber 1 protection measures) have been recommended; inspection of the completed work can be carried out by the Site Manager.

It is important that this inspection and verification is completed prior to the membrane being covered by later phases of construction, e.g. concrete floors.

The following points must be assessed as part of the inspection:

- correct thickness of membrane has been installed (as specified by the Technical Department);
- the surface beneath the membrane is clean and free from debris;
- the membrane has no holes or signs of damage;
- the membrane extends over the cavity wall;
- the membrane is continuous across internal walls;
- all joints are inspected for holes/unsecured sections;
- joins overlap by 150mm minimum and are welded or sealed with gas tight tape;
- corners are constructed with proprietary units (where possible), and are securely sealed, ensuring a minimum overlap of 150mm with the membrane;
- gaps around service entries filled with expanding foam prior to sealing with pre-formed proprietary units (tophats should be used where specified); and
- air bricks are free from debris.

Examples of good and bad practice are provided below.

The Site Manager must be aware that higher levels of gas protection (either Amber 2 or Red) require inspection by an independent assessor which is be arranged by the Technical Department.

Reference must always be made in the specification provided by the manufacturer / supplier.

Preparation of the Substructure

Provision of a blinding layer

Membrane extending over internal and cavity walls

Joints in the membrane are secure

Joints in the membrane are secure

Protecting the membrane after installation

After installation of the gas membrane

It is imperative that gas membranes are protected immediately after installation, to prevent damage. The Site Manager must emphasise the importance of protecting the membranes to follow-on trades.

The period over which an installed membrane can be left open to the weather must be minimised. Membrane materials can degrade when subject to ultraviolet light in sunlight and adverse wet or cold weather.

If reinforcing concrete is to be laid on top of membranes, measures must be taken to protect the membrane from damage from the reinforcing bars.

Air bricks (if installed) must be kept free of obstruction and ensure that landscaping plans do not result in blocking or limiting air flows.

9.3.7 FAUNA AND FLORA

9.3.7.1 PROTECTED SPECIES

There are several species in the UK that are protected by environmental legislation, such as badgers, great crested newts and bats. In many cases, it is an offence to disturb the species or damage their habitat. If identified or suspected on site, contact the **Environmental Advice / Incident Line – 0845 003 8752**.

Note: The habitat may also be protected along with the species and not just during breeding seasons

Great crested newt

9.3.7.2 PROTECTED TREES

A local authority may protect trees on a development site through Tree Preservation Orders (TPOs) or planning conditions. Additionally, nesting birds are protected, and their disturbance may be an offence.

The best method for protecting retained trees is to exclude any activity from the Root Protection Area (RPA). Protective barriers and ground protection must be erected around the RPA of the trees as a minimum. Heras fencing is now recommended as suitable protective fencing. Your SSEAP (see section 9.1.1 Site Specific Environmental Action Plan (SSEAP)) identifies what level of protection is required and if special considerations need to be considered.

Fencing/signage, indicating that this is an exclusion zone, and no access is permitted must be constructed.

9.3.7.3 PROTECTED HEDGEROWS

Hedgerows are protected by legislation in England and Wales (not Scotland), and consent must be sought from the local authority for their removal or disturbance. Protection may also be requested through planning conditions. The Land & Planning / Technical Department have consulted the local authority, and if necessary, an ecologist to confirm what conditions apply to hedgerows on your site. The details of any protection requirements are included in your SSEAP (see section 9.1.1 Site Specific Environmental Action Plan (SSEAP)).

9.3.7.4 INVASIVE WEEDS

Invasive weeds can spread rapidly, compete with native species, and destroy natural habitats. They are highly persistent and extremely difficult to control and eliminate once established, potentially causing structural damage to buildings and concrete and harming humans or animals

Flowering Japanese knotweed in summer

Japanese knotweed stems

To knowingly allow certain weeds to spread from your site is an offence – e.g. Japanese knotweed. It is important to be aware of which weeds can cause problems and to ensure that these are identified early and controlled on your site.

Nature and the Environment Strategy

Target: Increase natural habitats by 10% on new sites from 2023 and include priority wildlife enhancements from 2021.

Managing existing flora and fauna:

- Flora and fauna identification during site acquisition and design (utilise assessments stored in LEADR) maximises enhancement opportunities that can be better costed and tailored to the site. Early identification of invasive species minimises removal costs and site impact.
- Engaging local communities and expertise, e.g., beekeepers and materials suppliers, helps make sites amenable for local flora and fauna and reduces materials costs.

Enhancing biodiversity:

- Connect log piles and existing dense scrub and long grass with hedgehog highways to support the legally protected species, currently classified as vulnerable to extinction.
- Beehives and bee bricks can attract and sustain local colonies or solitary pollinator species. TW has a target of 200 beehives on sites by 2025.
- Bug hotels are cost effective and sustainably produced, with a variety of sizes available.
- Wild habitats and gardens increase floral diversity, attracting pollinators and other local fauna. Introduced flora should be native to the local area.

Integrating and developing biodiversity enhancements at early site design stage is critical to ensuring sufficient and effective measures are put in place on our sites.

9.3.7.5 SITE MANAGER'S RESPONSABILITIES

- Your Site-Specific Environmental Action Plan (SSEAP) (see section 9.1.1) details if any protected species, trees or hedgerows or invasive weeds have been or are present on your site. It advises you of any protection measures required, any licences that need to be applied for or adhered to and any tree preservation orders that need to be adhered to. This must include ensuring that they are clearly marked on the Site Plan.
- If none are shown in your SSEAP and you then identify a protected species or invasive weed, you must **immediately** seek specialist help by calling the **TW Environmental Advice / Incident Line 0845 003 8752**.
- Refer to the Protected Species Guide (see following pages and available on inhouse – HSE function – HSE Documents – Guidance Documents including Posters) provided in the site environmental start-up pack to assist in the identification of the most common types of protected species.
- Refer to the Invasive Weeds Guide (see section 9.3.7.7 Site Safe Briefing: Invasive Weeds and available on **inhouse** – HSE function – HSE Documents – Guidance Documents including Posters) provided in the site environmental start-up pack to assist in the identification of the most common types of invasive weeds.
- Ensure site campaign material, specifically the 'Invasive Weeds Guide', is displayed prominently.
- Inspect weekly (as a minimum) to ensure that identification and control measures are being adequately.
- There are specific requirements associated with the disposal of Japanese knotweed and some other invasive weeds as waste. Contact the Technical Department for advice.
- When working near trees, ensure fencing has been erected at least 1m back from the canopy and ensure that no work occurs within this area (see section 9.3.7.2).
- If identified hedgerows need to be removed, you must contact the Land & Planning / Technical Department who must then contact the local authority to obtain the relevant consent.
- Deliver Site Safe Briefing: Environmental Management (see Site Safe Briefing Folder) to advise all site staff and provide guidance on the identification of invasive weeds and any control measures.

9.3.7.6 PROTECTED SPECIES GUIDE

Protected Species

Taylor Wimpey

This guidance is to assist Site Managers in identifying protected species. **All of these animal species are strictly protected under law**. It is important that they are identified at the earliest opportunity. If you suspect you have or identify any protected species on your site you must take precautions to prevent them being harmed or disturbed.

Seek further guidance from your **Technical Team or the Environmental Advice Line 0845 003 8752** before taking action.

BIRDS

Background

- All wild bird species are protected by law.
- You will break the law if you knowingly and intentionally damage or destroy a nest; or if you take or destroy eggs.
- Some species of birds are afforded extra protection (e.g. Barn owl) and you cannot disturb them whilst nesting or building nest or disturb their young.

Identification

- Birds will nest in a variety of locations including trees; hedgerows; on the ground in scrub or grassland; and within buildings.
- Nesting season for most birds occurs between March and September. However, some species may nest earlier dependent on the weather.

Protection measures

- Carry out an inspection of vegetation or buildings prior to removal, both in and out of the breeding season.
- Carry out vegetation removal and demolition works out of the breeding season.
- Net vegetation out of the nesting season to prevent birds from nesting.
- Avoid disturbing nesting birds and their young (especially those given greater protection such as the barn owl) by reducing noise, lighting and vibration.

BADGERS

Background

- Badgers and their setts are protected by law.
- You be breaking the law if you:
  - willfully capture, kill or injure badgers;
  - damage, destroy or block access to setts; and
  - disturb badgers in setts.

Identification

- Evidence of badgers on/off site include: sett entrances, badger paths, latrines, scratching posts, evidence of digging for food, footprints, and badger hair on fences or bushes.

Protection measures

- Use of badger protection zones at certain distances from sett entrance:
  - ✓ 30m heavy plant;
  - ✓20m lighter machinery; and
  - ✓10m light work, such as using spade.
- Chemicals should not be used within 20m of sett.
- Disturbances, such as loud noise or vibration, should be avoided or limited to areas well away from the sett.
- Maintain foraging/watering areas and access between them and the setts.
- Avoid disturbance of setts during the breeding season (i.e. between the beginning of December and the end of June).

WATER VOLES

Background

- Water voles, their breeding sites and resting places are protected by law.
- You will be breaking the law if you:
  - knowingly and intentionally capture, kill or injure water voles;
  - damage, destroy or block access to their places of shelter or protection; and
  - disturb them in a place of shelter or protection.

Identification

- Found within and on banks of various water features (i.e. rivers, ditches, lakes, ponds, canals, etc.).
- Survey by professional ecologist should be able to identify presence of water voles within area.
- Presence of water voles can be identified from burrows within water banks and footprints.
- Water voles do not hibernate, but they are not very active above ground during winter months.

Protection measures

- Avoidance of polluting water environment (i.e. through silt run-off, chemical spillage, etc.).
- Do not entirely fence off area to enable water vole to forage for food.
- Avoid cutting down vegetation in area.
- Do not use heavy machinery in close proximity to water bank.

Protected Species

This guidance is to assist Site Managers in identifying protected species. **All of these animal species are strictly protected under law**. It is important that they are identified at the earliest opportunity. If you suspect you have or identify any protected species on your site you must take precautions to prevent them being harmed or disturbed.
Seek further guidance from your **Technical Team or the Environmental Advice Line 0845 003 8752** before taking action.

Taylor Wimpey

GREAT CRESTED NEWT


Background

- Great Crested Newts and habitat protected by law.
- You will be breaking the law if you:
  - intentionally kill, injure or take Great Crested Newts;
  - damage or destroy (even accidentally) a breeding or resting place; and
  - obstruct access to their resting or sheltering places.

Identification

- Granular and warty looking skin, dark brown or black with white spots.
- Males have bright orange underside with black blotches and large jagged crest on back.
- Adults are up to 15cm long.
- Found in any body of water during spring and early summer and in surrounding land during summer.
- Hibernate under logs and stones or buried in mud during winter months.

Protection measures

- Stop work in immediate area if Great Crested Newts found on site.
- Only suitably qualified ecologist permitted to handle or move Great Crested Newts.
- Be careful when moving logs, stones or rubble.
- Don't touch or otherwise disturb any Great Crested Newts.
- Avoid chemical, fuel and silt run-off into watercourses.
- Avoid heavy traffic movements and pedestrians in area.

BATS


Background

- Bats and their roosts are protected by law.
- You're breaking the law if you:
  - capture, kill, disturb or injure bats;
  - damage or destroy a breeding or resting place; and
  - obstruct access to their resting or sheltering places.

Identification

- Found foraging for food in areas of woodland and pasture. Bats are more likely to be seen foraging during dusk and/or dawn;
- Might only use roost at particular time of year, however, roosts remain protected without bats present.
- Common bat roosts include roofs and eaves; under bridges; trees with holes, cracks and splits; and underground places such as basements and tunnels.

Protection measures

- Avoid damage to known roosts.
- If a bat or bat roost is found on site, stop all works in the area immediately and consult qualified ecologist.
- Do not try to touch or handle a bat.
- Avoid heavy traffic movements and pedestrians in areas close to known roosts.

DORMOUSE

Background

- Dormice, their breeding sites resting places are protected by law.

Identification

- Found within woodlands and hedgerows, hibernating in autumn either on the ground or just beneath the surface of the ground.

Protection measures

- Avoidance of activities that cause high levels of noise and vibration where dormice known to be present.
- Ensure permission is given before removal of hedgerows or trees.
- If a dormouse is found on site, stop all works in the area immediately and consult qualified ecologist.
- Do not try to touch or handle a dormouse.

SLOW WORM

Background

- Slow works are protected through all stages of their lifecycle from intentional killing or injury by law.

Identification

- Can be confused with small or young snakes but are much smaller than any native snakes.
- Have smooth gold-grey skin, males are greyer. Females are larger and have a dark stripe down the back.

Protection measures

- Be careful when clearing vegetation or moving logs, stones or rubble.
- If slow worms are found stop work in immediately and consult a qualified ecologist.

Site Safe

9.3.7.7 INVASIVE WEEDS GUIDE

Invasive Weeds

Taylor Wimpey

This guidance is to assist Site Managers in identifying invasive weeds. **All of these weeds spread rapidly**. It is important that there are identified at the earliest opportunity. If you identify or, you suspect you have any of these invasive weeds on your site take precautions to prevent the area from being disturbed.

Seek further guidance from your **Technical Team or the Environmental Advice Line 0845 003 8752** before taking action.

Japanese Knotweed

Spring Summer Winter

Issues
- Grows through hard surfaces

Identification
- Can reach heights of 2-3m
- Red/purple shoots; smooth, green speckled red stem; hollow brown canes
- Shovel shaped leaves that alternate on stem
- Lush green arching stems
- Clusters of creamy white flowers in late summer

Himalayan Balsam

Spring Summer Winter

Issues
- Its removal; especially from river banks, can lead to erosion, silt issues and flooding

Identification
- Grows mainly on river banks and in damp conditions
- Upright, hollow, purple tinged stem
- Common height of 0.5-2m
- Flowers vary in colour from white through to pink/purple
- Leaves have jagged edges and grow three to each stem
- Decays very fast following die back

Giant Hogweed

Spring Summer Winter

Issues
- Sap burns skin causing blisters in sunlight

Identification
- 5-7 years life cycle, flowers in final season only.
- Flower head is cone shaped and contains several thousand small white flowers
- Leaves are jagged, can reach over 1m in diameter
- Can reach 5m tall but typically 2-3m.
- Thick stout green-reddish purple stem with bristles

Horsetail (Mare's Tail)

Spring Summer Winter

Issues
- Grows through hard surfaces

Identification
- Shoots 20-50cm tall
- Stems commonly 50-75cm tall
- Dense green foliage
- Die back late winter

Common Ragwort

Spring Summer Winter

Issues
- Toxic to cattle and horses

Identification
- Often found as leafy clusters
- Light to dark green leaves deeply lobbed leaves
- Grows 30-100 cm high
- Woody stems which are red at the base

Photos courtesy of the British Horse Society