Materials Reprocessing Facility, Westonzoyland

Dust Management Plan

8th May 2018

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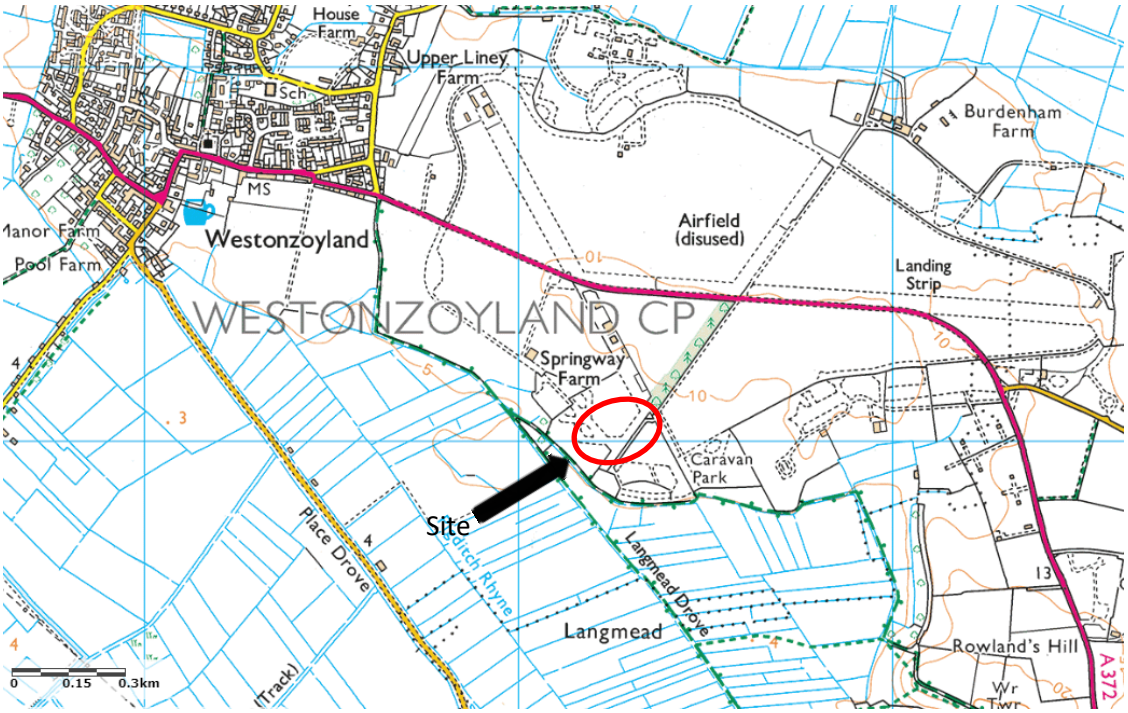
Contents

1 Introduction

1.1 Towens of Weston Ltd (Towens) propose to operate a Materials Reprocessing Facility (MRF) at their site on Springway Business Park near Westonzoyland. The MRF will handle, process and store aggregates/hardcore, road planings, wood, green waste and soils.

1.2 The Site is located to the south east of Westonzoyland on the southern part of an old airfield and measures approximately 1.3ha in area.



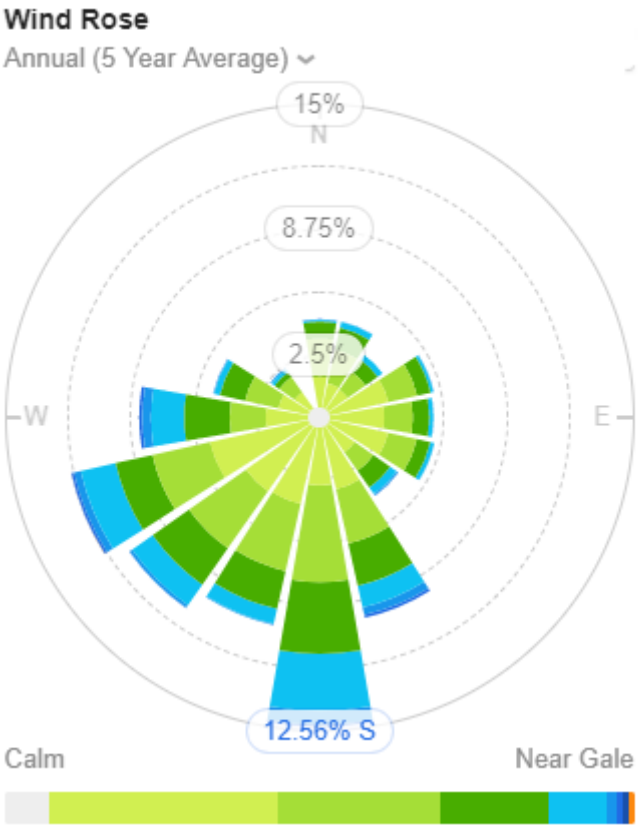
Sensitive Receptors

1.3 The key sensitive receptors are mainly ecological in nature which have been identified through correspondence with Natural England and Somerset County Council, consisting of:

- A small caravan park 100m to the southeast;
- SSSI (Langmead and Weston Level) 50m to the south;
- Surrounding rhynes; and
- RAMSAR site (Somerset Levels and Moors), the closest point of which is 1,800m to the northeast.

1.4 There is an industrial estate within 100m and whilst a receptor occupants are not considered specifically in the definition of "sensitive", although it is noted that if dust were to be allowed to escape the site boundaries in visible quantities they may be impacted.

1.5 Details of the prevailing winds for the area are shown below.



The wind rose shows the proportion of time the wind blows from the indicated direction.

Based on 5 years of weather monitoring at Westonzoyland (reproduced from www.willyweather.co.uk)

1.6 The prevailing wind direction indicates that winds are predominantly from the south-west and south. Hence, in the unlikely event of significant dust emissions at the Site those receptors most likely to be impacted are those immediately north-east and north. The SSSI and rhynes to the south, west and southeast of the Site are at considerably lower risk from dust due to the low proportion of wind blowing in those directions which even which it does blow towards these receptors, it is of low strength and so particulates are unlikely to be carried a great distance (<50m).

2 Operations

Site Layout & Operations

Site Layout

2.1 Site Plan ref SCR.WZ.2017 shows the layout of the site.

2.2 The Site comprises impermeable hardstanding. A bunded processing area is located in the middle of the western part of the site, with a topsoil storage building on the southwestern boundary. Storage bays, some of which are covered, line the western and southeastern boundaries of the site. A 3m tall perimeter wall surrounds the site with the exception of the northern boundaries (between the site and adjoining field) where the wall will be 2.4m in height but shall also be lined with hedgerows.

2.3 The Site Entrance is located at the northern corner of the eastern part of the site with two emergency access points at the northeast and northwest boundaries.

Waste Operations

2.4 Incoming materials are deposited into their appropriate incoming bays according to their type. Material types are then processed in campaigns – processing includes:

- Crushing and screening of hardcore and road planings;
- Screening of soils;
- Shredding of green waste; and
- Chipping of wood.

2.5 All these activities are performed within the processing area. Once processed, the materials are then placed into their appropriate outgoing bays to await collection.

2.6 All materials delivered to the site and removed from the site are in covered loads.

2.7 Material will not be accepted onto site under the following circumstances:

- If there is insufficient storage capacity within the waste transfer building;
- If there are extreme weather conditions, such as site flooding; and
- Abnormal Site conditions preventing normal working.

3 Dust Management

Responsibility for Implementation of the DMP

Management

3.1 The Managing Director has ultimate responsibility for all legislative requirements. Direct responsibility for implementing the DMP is held by the Technically Competent Management who will also be responsible for interim audits of the Management System in response to changes to the Site's operation, company changes, incident/accidents, complaints, and use of new plant or techniques

3.2 Towens will audit Site performance against the Management System, including dust and particulate management on an annual basis. The DMP will be reviewed on an annual basis, or if there are any procedural changes, changes in equipment, variations in the permit, or after any accident or breach of the permit.

Operational Staff

3.3 All Site staff receive a Site Induction when they commence on Site. The member of management carrying out the induction will take each inductee through the Company's list of Site Rules and Manager's Rules. All Site staff involved in the operations will receive training appropriate to their role. Additional training requirements will be reviewed annually, or if there are any procedural changes or changes in plant.

Training

3.4 Management will ensure that the Technical Competency is maintained in accordance with industry requirements. The Site staff will be suitably trained in their roles and responsibilities with on-site training by the technically competent management, to ensure that they conduct their duties in compliance with the Management System.

3.5 Management will periodically review the Company's environmental policy and objectives.

Visual Dust Monitoring

3.6 It is the duty of all site staff to remain constantly vigilant to dust releases and raise awareness of this issue should it arise. Visual dust inspections will be completed at least twice daily:

- On arrival at the site and before sorting and / or agitation of the waste occurs; and
- After the designated lunch break, before afternoon sorting and / or agitation of the waste occurs.

3.7 The site staff responsible for this monitoring and record the results. The inspection focusses on the following areas:

- Monitoring for conditions likely to increase the risk of dust release;
- Visual assessment of any dust release; and
- Monitoring of any visible surface soiling.

3.8 The results of these inspections are recorded in the Site Diary. This will include both the prevailing conditions at the time of the observation (weather and nature of activity), the observation of any dust and location at which observations were made.

3.9 Should visible off site dust be released to the surrounding environment as a result of a particular activity, control measures would then be applied until the dust levels return to normal and the activity will be reviewed in order to prevent re-occurrence.

3.10 Additional, constant monitoring of all loads and on-going inspection of the facility activities by staff during normal operations. The results including any incidents of visible off-site dust emissions, will be recorded on a daily sheet similar to that below and events will be reported to the Environment Agency, if requested.

Daily Visual Dust Checks	
Date and time-	
Name of staff member	
Wind direction at time of inspection	
Wind Strength expected from weather forecast	
Any non routine operations on site	
Any non routine activities likely to produce dust in immediate vicinity -	
Inspection (visible dust release beyond the boundary)	**Yes / No** **Remarks:**

Sources and Control of Fugitive Dust/Particulate Emissions

3.11 Sources of potential dust emission

- Vehicles tracking dust on to or off the site;
- Vehicles and plant moving around the site kicking up dust;
- Road vehicles tipping materials;
- Excavators/360s sorting materials;
- Plant sorting materials – (crusher/screener/shredder);
- Materials stored in bays;
- Loading waste materials back on to vehicles.

3.12 The pathway for the dust to sensitive receptors is windblown, although as noted above the sensitive receptors lie out of the prevailing wind direction.

3.13 The control of dust and particulate emissions from the site will be the overall responsibility of the Site Manager. The sources of possible dust emission and the measures used to control and mitigate dust arising are not limited to any particular circumstances and any of the control measures available will be used where appropriate and effective to address any potential source of dust. Any activities causing visible off site emissions from the facility will be suspended until the appropriate dust suppression systems have brought the situation under control. Such measures will include:

- The operation of a pole mounted water spray dust suppression system, and/or damping the operational area;
- Use of a roadsweeper on site to remove surface dust;
- Containment of materials;
- Control of transportation and speed limits;
- General good housekeeping on site; and
- Modification and/or cessation of operations in extreme conditions.

3.14 The implementation of the appropriate dust suppression system will be monitored to ensure its effectiveness.

3.15 A high-pressure hose is available on site which drivers are instructed to use if their wheels are likely to track mud onto the road, although impermeable hard surfacing across all tracked areas reduces the likelihood of this significantly.

3.16 The whole site is screened from wind by the high perimeter wall, reducing the chance of dust being blown up across the site and retaining any that might be. Furthermore, the material storage bay walls, which screen the materials on 3 sides, will further buffer winds and prevent dust arising.

3.17 The topsoil storage building is further protected from wind, sheltered on three sides with the open side facing northeast where little wind blows from. The topsoil building, as well as wood and green waste bays, are also rooved, aiding the retention and reducing the likelihood of dust.

3.18 In the event that the dust suppression system breaks down, hosepipes will be used instead to damp down the waste and yard areas. If this is not effective, then no further waste will be accepted onto site until dust mitigation is working again.

3.19 Should visible off-site dust be released to the surrounding environment as a result of a particular activity, control measures detailed above would then be applied until the dust levels return to normal and the activity will be reviewed in order to prevent re-occurrence.

3.20 The likelihood of dust leaving the site outside of operational hours is considered to be negligible as the potential sources of dust are primarily related to operational issues.

3.21 The Site will be shut down if conditions prevent normal working methods leading to an unacceptable risk such as risk of pollution from dust emission. Such conditions include critical failure of the dust management measures, extreme weather conditions; or emergency situations such as outbreak of fire.

4 Complaints

4.1 Any complaints received at the site will be immediately investigated by the Site Manager and, where appropriate, remedial action taken. The complaint will be reported to the Directors within 24 hours of its receipt. Details will be recorded using the Towens Non-Conformance procedure, which forms part of the Towens Environment Management System and details will also be recorded in the site diary.

NON-CONFORMANCE REPORT (NCR)			
NCR NUMBER:		DATE:	
Please circle relevant system	9001 (quality)	14001 (Environment)	19001 (Health & Safety)
DESCRIPTION OF NON-CONFORMANCE:			
IDENTIFIED BY (NAME):			
REASON FOR NON-CONFORMANCE:			
CORRECTIVE ACTIONS REQUIRED:			
CORRECTIVE ACTIONS:			
Action:	Implemented By:	Date:	
PROCEDURE MANUAL AMENDED (If applicable):			
NAME:	POSITION:	DATE:	
NAME	POSITION:	DATE:	

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WASTE RESOURCE MANAGEMENT

TOWENS OF WESTON LTD

WESTONZOYLAND WASTE TRANSFER STATION

Noise Assessment Report

OCTOBER 2017

your earth our world

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TOWENS OF WESTON LTD

Westonzoyland Waste Transfer Station

Noise Assessment Report

October 2017

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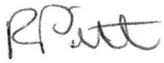

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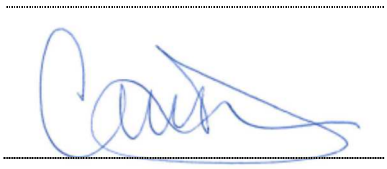

ENERGY AND CLIMATE CHANGE
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INFRASTRUCTURE AND UTILITIES
LAND AND PROPERTY
MINING AND MINERAL PROCESSING
MINERAL ESTATES AND QUARRYING
WASTE RESOURCE MANAGEMENT

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APPENDICES

DRAWINGS

1 INTRODUCTION

1.1.1 By email instruction dated the 10th August 2017, from Towens of Weston Ltd, Wardell Armstrong LLP was commissioned to undertake a noise assessment to support an Environment Agency waste permit application for the daytime operation of a waste transfer station at Springway Industrial Estate, Westonzoyland Road, Westonzoyland, TA7 0JS.

1.1.2 Due to the proximity of the scheme to existing Sites of Special Scientific Interest (SSSI) and the potential impact of the proposed development upon the over wintering birds that use the sites, Natural England have requested a noise assessment to support the waste permit application. In addition to this, there are also a number of residential properties in the vicinity of the proposed development which will be considered as part of this assessment.

1.1.3 The proposed development is located to the south east of Westonzoyland. To the north east of the site lies a row of industrial properties and some farm buildings, beyond which lies an open field and a dirt bike track. To the east of the site lies a narrow lane beyond which lies agricultural land. Approximately 1.8km to the east lies Kings Sedgemoor SSSI. To the south east of the site lies Springway Lane Business Park, south of which lies a small residential area. To the south west of the site lies Slabs R Us Ltd, beyond which lies Langmead and Weston Level SSSI. To the west of the site lies open land.

1.1.4 The report assesses the results of a noise survey carried out in accordance with current guidance, and considers the impact of noise from the proposed development on existing sensitive receptors.

2 ASSESSMENT METHODOLOGY

2.1 Consultation and Scope of Works

2.1.1 The scope of this assessment comprises a consideration of noise at existing sensitive receptor locations, located in the vicinity of the proposed development.

2.1.2 The scope of the project was submitted to Natural England for review. Natural England raised concerns that the operation of the development may impact upon wintering birds that may use Langmead and Weston Level SSSI to the south of the site Kings Sedgemoor SSSI to the east of the site. Natural England have outlined the noise levels above which birds may begin to react. The report is attached as Appendix A and the SSSI locations are shown on drawing number CA11269-001.

2.1.3 Prior to carrying out the noise assessment the methodology was agreed in principle with Mr Martin Stoyles, the Environmental Health Officer at Sedgemoor District Council.

2.2 Noise Surveys

2.2.1 On 8th and 14th September an attended noise survey was undertaken at 3 locations considered representative of the existing residential receptors in the vicinity of the proposed noise sources. Additional noise monitoring was undertaken at a similar, existing Towens waste treatment facility in Weston Super Mare. This data has been used to provide source noise level data to inform the noise assessment report. The noise survey is discussed in Section 3 of this report.

2.3 Assessment Methodology

2.3.1 An assessment is required to consider the potential noise impact of the proposed development on existing sensitive receptors. The potential impacts have been assessed with reference to;

- National Planning Policy Framework, 2012; (NPPF);
- Planning Practice Guidance (Noise), 2014;
- Noise Policy Statement for England 2010; (NPSE);
- World Health Organisation Guidelines for Community Noise (WHO);
- British Standard 8233: 2014 Guidance on sound insulation and noise reduction for buildings (BS8233);
- British Standard BS4142: 2014 Methods for rating and assessing industrial and commercial sound (BS4142); And
- Guidance provided by Natural England.

National Planning Policy Framework

2.3.2 In March 2012 the 'National Planning Policy Framework' (NPPF) was introduced as the current planning policy guidance within England. Paragraph 123 of the NPPF states:

'Planning policies and decisions should aim to:

- avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development;
- mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;
- recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established; and
- identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.'

2.3.3 In terms of 'adverse effects' the NPPF refers to the 'National Policy Statement for England' (NPSE), which defines three categories, as follows:

'NOEL – No Observed Effect Level

- This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.

LOAEL – Lowest Observed Adverse Effect Level

- This is the level above which adverse effects on health and quality of life can be detected.

SOAEL – Significant Observed Adverse Effect Level

- This is the level above which significant adverse effects on health and quality of life occur.'

2.3.4 The first aim of the NPSE states that significant adverse effects on health and quality of life should be avoided. The second aim refers to the situation where the impact lies somewhere between LOAEL and SOAEL, and it requires that all reasonable steps are taken to mitigate and minimise the adverse effects of noise. However the requirement to mitigate and minimise the adverse effects of noise does not mean that such adverse effects cannot occur.

2.3.5 The Planning Practice Guidance (PPG) provides further detail about how the effect levels can be recognised. Above the NOEL noise becomes noticeable, however it has no adverse effect as it does not cause any change in behaviour or attitude. Once noise crosses the LOAEL threshold it begins to have an adverse effect and consideration needs to be given to mitigating and minimising those effects, taking account of the economic and social benefits being derived from the activity causing the noise. Increasing noise exposure further might cause the SOAEL threshold to be crossed. If the exposure is above this level the planning process should be used to avoid the effect occurring by use of appropriate mitigation such as by altering the design and layout. Such decisions must be made taking account of the economic and social benefit of the activity causing the noise, but it is undesirable for such exposure to be caused. At the highest extreme the situation should be prevented from occurring regardless of the benefits which might arise. Table 1 summarises the noise exposure hierarchy.

Table 1 National Planning Practice Guidance noise exposure hierarchy

Perception	Examples of Outcomes	Increasing Effect Level	Action
Not noticeable	No Effect	No Observed Effect	No specific measures required
Noticeable and not intrusive	Noise can be heard, but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed adverse Effect	No specific measures required
Lowest Observed Adverse Effect Level			
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			

Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Noticeable and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent

2.3.6 The Noise Policy Statement for England refers to the World Health Organisation (WHO) when discussing noise impacts. The WHO Guidelines for Community Noise 1999 suggest guideline values for internal noise exposure which take into consideration the identified health effects and are set, based on the lowest effect levels for general populations. Guideline values for amenity which relate to external noise exposure are set at 50 or 55 dB(A), representing day time levels below which a majority of the adult population will be protected from becoming moderately or seriously annoyed respectively.

2.3.7 The following guideline values are suggested by WHO:

- 35 dB L_{Aeq} (16 hour) during the day time in noise sensitive rooms
- 30 dB L_{Aeq} (8 hour) during the night time in bedrooms
- 45 dB L_{Amax} (fast) during the night time in bedrooms
- 50 dB L_{Aeq} (16 hour) to protect majority of population from becoming moderately annoyed
- 55 dB L_{Aeq} (16 hour) to protect majority of population from becoming seriously annoyed

2.3.8 With regard to external noise, BS8233, 2014 states;

> *"For traditional external areas that are used for amenity space such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB $L_{Aeq.\ T}$ with an upper guidance value of 55 dB $L_{Aeq.\ T}$ which would be acceptable in noisier environments. However, it is also recognised that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited".*

2.3.9 The PPG summarises the approach to be taken when assessing noise. It accepts that noise can override other planning concerns, but paragraph 002 of the noise guidance states:

> *"Neither the Noise Policy Statement for England nor the National Planning Policy Framework (which reflects the Noise Policy Statement) expects noise to be considered in isolation, separate from the economic, social and other environmental dimensions of proposed development".*

British Standard 4142:2014 (BS4142), Method for rating and assessing industrial and commercial sound:

2.3.10 BS4142 is used to rate and assess sound of an industrial and/or commercial nature including:

- sound from industrial and manufacturing processes;
- sound from fixed installations which comprise mechanical and electrical plant and equipment;
- sound from the loading and unloading of goods and materials at industrial and/or commercial premises; and
- sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from premises or processes, such as that from forklift trucks, or that from train or ship movements on or around an industrial and/or commercial site.

2.3.11 The standard is applicable to the determination of the following levels at outdoor locations:

- rating levels for sources of sound of an industrial and/or commercial nature; and
- ambient, background and residual sound levels, for the purposes of:

  1) Investigating complaints;

  2) Assessing sound from proposed, new, modified or additional source(s) of sound of an industrial and/or commercial nature; and

  3) Assessing sound at proposed new dwellings or premises used for residential purposes.

2.3.12 The purpose of the BS4142 assessment procedure is to assess the significance of sound of an industrial and/or commercial nature.

2.3.13 BS4142 refers to noise from the industrial source as the 'specific noise' and this is the term used in this report to refer to noise which is predicted to occur due to equipment associated with the proposed development. The 'specific noise' levels, of the proposed development are detailed in Section 4 of this report.

2.3.14 BS4142 assesses the significance of impacts by comparing the specific noise level to the background noise level (L_{A90}). Section 3 provides details of the background noise survey undertaken.

2.3.15 Certain acoustic features can increase the significance of impacts over that expected from a simple comparison between the specific noise level and the background noise level. In particular BS4142 identifies that the absolute level of sound, the character, and the residual sound and the sensitivity of receptor should all be taken into consideration. BS4142 includes allowances for a rating penalty to be added if it is found that the specific noise source contains a tone, impulse and/or other characteristic, or is expected to be present. The specific noise level along with any applicable correction is referred to as the 'rating level'.

2.3.16 The greater the increase between the rating level over the background noise level, the greater the magnitude of the impact. The assessment criteria given by BS4142 are as follows:

- A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context.

- A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context.
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

2.3.17 During the daytime, BS4142 requires that noise levels are assessed over 1-hour periods. However, during the night-time, noise levels are required to be assessed over 15-minute periods.

2.3.18 Where the initial estimate of the impact needs to be modified due to context, BS4142 states that all pertinent factors should be taken into consideration, including:

- The absolute level of sound;
- The character and level of the residual sound compared to the character and level of the specific sound; and
- The sensitivity of the receptor and whether dwellings or other premises used for residential purposes will already incorporate design measures that secure good internal and/or outdoor acoustic conditions.

Natural England Guidance:

2.3.19 Natural England have provided a report outlining noise levels above which birds may begin to react. This report is included as Appendix A. In summary, the report states that:

> *'Natural England guidance currently suggest that birds begin to react to a noise level of above 55dB. As a general rule, if the noise source is no more than 3dB higher than background noise levels, then Natural England accepts that it is unlikely to be significant'*

2.4 Existing Sensitive Receptors

2.4.1 The following existing receptors have been identified as those closest to the proposed development. Other receptors may be affected by noise from the proposed development, however the impact at these receptors will be equal to or less than at the receptors identified.

2.4.2 The existing sensitive receptors identified are shown in Table 2 and drawing CA11269-001.

Table 2: Existing Noise Sensitive Receptor Locations

Receptor		Grid Co-ordinates		Bearing from Site	Distance to Site Boundary
		Easting	Northing		
ESR1	Residential property off A372	336214	134360	North	250m
ESR2	Springway Lane, Westonzoyland, adjacent to residential properties	336283	133867	South	50m
ESR3	Langmead & Weston Levels SSSI	336141	133935	South West	20m
ESR4	Kingsmead SSSI	337940	134708	East	1700m

3 NOISE SURVEY

3.1.1 Wardell Armstrong LLP carried out a noise survey at the existing sensitive receptors on the 8th and 14th September 2017.

3.1.2 Attended noise measurements were taken at three monitoring locations (shown on drawing No. CA11269-001), which were considered to be representative of the existing noise sensitive receptors in the vicinity of the proposed noise sources. The monitoring locations were as follows:

- Monitoring Location 1: Approximately 20m from the A370 and 370m north of the proposed development. The noise levels at this location are considered representative of those at ERS1;
- Monitoring Location 2: Adjacent to Langmead & Weston SSSI and Springway Lane residential area. Approximately 50m south of the proposed development. The noise levels at this location are considered representative of those at ESR2 and 3;
- Monitoring Location 3: Approximately 70m east of the A361 within Kings Sedgemoor SSSI and approximately 3,800meast of the proposed development. The noise levels at this location are considered representative of those at ERS4.

3.1.3 Attended noise monitoring was carried out on the 8th and 14th September 2017 between 1100hours and 1500 hours to capture background noise during the quieter parts of the day within the proposed operational hours of the development.

3.1.4 An additional measurement was taken at approximately 5m from the crusher machine of a similar existing Towens waste transfer facility in Weston Super Mare in order to establish the likely worst case source noise levels of the proposed development. This was taken between 1507 and 1509 when traffic flows on the A361 were at their lowest daytime level in order to minimise the impact of external traffic noise.

3.1.5 The noise measurements were made using a Class 1, integrating sound level meter. The sound level meter was mounted vertically on a tripod 1.5m above the ground and more than 3.5 metres from any other reflecting surfaces.

3.1.6 Noise monitoring took place during dry and calm weather conditions. The sound level meter was calibrated to a reference level of 94dB at 1kHz both before, and on completion of, the noise survey. No drift in calibration over 0.5dB was measured during the survey.

3.1.7 For the purpose of this assessment daytime hours are taken to be 0700 to 2300 hours and night-time hours to be 2300 to 0700 hours.

3.1.8 A-weighted[1] L_{eq}[2] and maximum noise levels were measured to comply with the requirements of WHO. The L_{90}[3], L_{10}[4] and minimum sound pressure levels were also measured to provide additional information. The measured noise levels are set out in full in Appendix B.

3.1.9 During the survey observations were made of the significant noise sources which contribute to the noise levels at the site. The observations identified the following:

Road Traffic Noise: Road traffic was the dominant noise source at monitoring location 1.

Industrial Noise from Springway Lane Business Park: Industrial noise including vehicle movement, machinery and other activities was audible from several locations within Springway Lane Business Park at monitoring location 2.

Birdsong: Birdsong was audible at each monitoring locations throughout the survey.

Other Sources: Distant aircraft were occasionally audible. Noise from people talking and car doors opening and closing was also occasionally audible at monitoring locations 1 and 2.

[1] A' Weighting — An electronic filter in a sound level meter which mimics the human ear's response to sounds at different frequencies under defined conditions

[2] L_{eqs} — Equivalent continuous noise level; the steady sound pressure which contains an equivalent quantity of sound energy as the time-varying sound pressure levels.

[3] L_{90} — The noise level which is exceeded for 90% of the measurement period.

[4] L_{10} — The noise level which is exceeded for 10% of the measurement period.

4 NOISE IMPACT ASSESSMENT

4.1 BS4142 Assessment

4.1.1 The proposed development will include processes and the installation of equipment with noise emissions which may be audible at the nearest existing sensitive receptors. Therefore, an industrial noise assessment has been carried out in accordance with BS4142 to assess the impact of noise from the development on existing sensitive receptors.

Identification of the Specific Noise

4.1.2 The proposed development will include equipment and processes which will generate noise. In order to establish likely noise levels from the proposed development in operation, noise measurements were taken at a similar existing Towens Waste Transfer facility in Weston Super Mare.

4.1.3 The main activities at the proposed development will be crushing and processing materials and vehicles moving material around the site. The loudest operation will be the crushing of materials. This operation will occur 2 or 3 times a week for 1 to 2 hours at a time. In order to form a robust assessment measurements were taken approximately 5m from the crusher whilst it was in use for two minutes. This measurement will be used for the assessment.

4.1.4 A summary of the noise emissions to be used within this assessment to represent the potential noise levels from the proposed development is shown in Table 3, below.

Table 3: Specific Noise Levels of Proposed Development at 5m from Weston Super mare Crusher

Noise Source	Sound Level (L_{eq}dB(A))
Proposed Development	74

4.1.5 As it is proposed that the waste transfer facility will run between 0800hours and 1700hours, only a daytime noise assessment will to be carried out. A distance correction has been applied to the measured noise level to predict the worst case noise levels received at each ESR from the development. It is assumed that the crusher would be at the centre of the site, therefore distances were measured from this location. Additionally, a 2.5m concrete block wall is proposed along the south eastern boundary of the site, therefore a barrier correction of -9dB has been applied to the likely noise level at ESR 2. The likely noise levels are summarised in Table 4 below. In

order to provide a robust assessment, no additional corrections have been applied to account for likely soft ground or existing barrier attenuation.

Table 4: Noise Levels of Proposed Development at Existing Sensitive Receptors

Receptor	Total Noise Level L_{Aeq}
ESR1	36
ESR2	38
ESR3	47
ESR4	22

4.1.6 The noise levels detailed in Table 4 are used as the specific industrial noise levels in the BS4142 assessment described below.

Application of any acoustic feature penalties

4.1.7 BS4142 includes guidance on the application of an additional weighting which should be applied should the industrial noise be considered to be either tonal, impulsive, or intermittent at the existing sensitive receptor.

4.1.8 It is considered likely that the proposed development will be both impulsive and intermittent. Therefore a correction of +3dB will be added to account for impulsivity and +3dB for intermittency.

Identification of the Background Noise

4.1.9 Section 8 of BS4142 provides guidance on the selection of the background noise to be used in the assessment. BS4142 states that the background noise levels used for the assessment should be representative of the period being assessed (i.e daytime or night-time periods), and that there is no "single" background sound level.

4.1.10 Therefore some assessment of the measured noise levels is required to select the most appropriate and representative background sound levels. An assessment has been carried out based upon the measured noise levels.

4.1.11 A summary of the daytime measured background noise level for use in the assessment is presented in the Table 5.

Table 5: Daytime Background L_{90} Noise Level – (Figures in dB(A))			
Receptor	**Existing Sensitive Receptor Locations**		
Monitoring Location	**ESR1**	**ESR2&3**	**ESR4**
Average Value	41	44*	35
Lowest Measured Value	40	44	34
Level to be used in the assessment	**40**	**44**	**34**
***The noise levels observed during the second recording at monitoring location 2 are considered unrepresentative of normal noise levels at this location due to a dirt bike operating in the neighbouring field, therefore this has been excluded from the assessment**			

BS4142 Assessment - Daytime

4.1.12 In accordance with BS4142, the noise rating levels for the noise sources associated with the proposed development, as received at the existing sensitive receptors, have been compared with the corresponding measured background noise levels during the daytime, as shown in Table 6.

Table 6: BS4142 Assessment of the Noise at Existing Receptors in the vicinity of Proposed Development during the Daytime – (Figures in dB(A))				
Description	**Existing Sensitive Receptor Locations**			
	ESR1	**ESR2**	**ESR3**	**ESR4**
Specific Sound Level i.e. noise level of the operational activities (including distance correction), dB L_{Aeq}	36	38	47	22
Acoustic Feature Correction, dB	+6	+6	+6	+6
Rating Level, dB	42	44	53	28
Background Noise level Range for Period	40	44	44	34
Excess of rating over Background level	**+2**	**+0**	**+9**	**+0**

4.1.13 The results of the BS4142 assessment indicate that the exceedance of the noise from the proposed development over the existing background noise level is likely to be +2dB(A) at ESR1, +9dB at ESR 3 and +0dB(A) at ESR2 and 4 during the daytime.

BS4142 Context Assessment

4.1.14 BS4142:2014 States; "The significance of sound of an industrial and/or commercial nature depends upon both the margin by which the rating level of the specific sound

sources exceeds the background sound level and the context in which the sound occurs".

4.1.15 The first requirement of this statement has been determined within the noise impact assessment section above. To determine the context in which the proposed industrial sound will reside, three factors must be considered, these are;

- The absolute level of sound;
- The character and level of the residual sound compared to the character and level of the specific sound and,
- The sensitivity of the receptor.

Absolute level of Sound

4.1.16 The impact of a given difference between rating level and background noise level will depend upon whether the residual sound level is low or high.

4.1.17 At ERS1 the existing residual sound level is relatively high but the rating level is relatively low. The noise from the proposed development is unlikely to make the existing noise impacts any worse at this location.

4.1.18 At ESR2 the rating level is lower than the existing residual sound level, therefore the noise from the development is unlikely to make the existing noise impacts any worse at this location.

4.1.19 At ERS3 the existing residual sound level and the rating level are of a similar level and are relatively low. The noise from the proposed development is likely to have a fairly neutral effect at this location.

4.1.20 At ESR4 the existing residual sound level is relatively low and the rating level is very low. The noise from the proposed development is unlikely to make the existing noise impacts any worse at this location.

Character and Level of Residual Sound compared to the Character and Level of the Specific Sound

4.1.21 ESR 1 is adjacent to a fast road, which is the dominant source of noise at this location, with occasional noise observed from Springway Lane Business Park. It is consider likely that the character of the noise at this location would remain relatively unchanged with the proposed development in place, i.e. dominated by traffic noise with occasional industrial noise from Spingway Lane Business Park. In addition, due to the relatively high residual sound level at this location and relatively low rating level of the proposed

development, it is considered likely that the proposed development would have no significant impact on the character of the noise at this location.

4.1.22 At ESR 2 the dominant noise source is the Springway Lane Business Park, which is industrial in nature. Additionally the rating level of the proposed development would be lower than the existing residual noise level. Though noise from the proposed development may be audible, it would not alter the character of the noise at this location or be discernible against the existing noise of similar character.

4.1.23 At ESR 3 the dominant noise source is also Springway Lane Business Park. At this location the residual sound level and the rating level of the proposed development are fairly comparable. Though noise from the proposed development may be audible, it would not alter the character of the noise at this location or be discernible against the existing noise of similar character.

4.1.24 ESR4 is in a rural area, where the dominant noise is distant traffic and birdsong. Due to the very low noise levels likely at the ESR from the proposed development, it is unlikely to be audible and therefore have no significant impact on the character or the level of the noise in the area.

Sensitivity of Receptor and Existing Acoustic Conditions

4.1.25 The ESR1 and 2 are residential nature and ESR3 and 4 are wildlife related. The sensitivity of these receptors is therefore considered high. Due to the existing noise levels at ESR1 and 2 it is assumed that these properties would already have sufficient noise mitigation to deal with the existing conditions.

Summary of the BS4142 Assessment

4.1.26 When considering the site context, and in accordance with BS4142, noise from the proposed development will cause a **low impact** at each ESR1, 2 and 4 during the daytime with no mitigation in place. Therefore no additional mitigation measures have been recommended.

4.1.27 When considering the site context, and in accordance with BS4142, it is likely that noise from the proposed development will cause a **moderate impact** at ESR 3 during the daytime with no mitigation in place.

4.2 Natural England Assessment

4.2.1 Due to concerns raised by Natural England and the potential impact of the proposed development on wintering birds using Langmead and Weston Levels SSSI and Kings

Sedgemoor SSSI, an assessment based on the Natural England guidance has been carried out. This assessment applies to ESR3 and 4 only.

4.2.2 The guidance suggest that birds may begin to react to noise levels above 55dB(A). Table 7 below shows the likely ambient noise levels at ESR2 and ESR 3 when the proposed development is operational.

Table 7: Assessment of the Ambient Noise at Existing Wildlife Receptors in the Vicinity of Proposed Development during the Daytime – (Figures in dB(A))

Description	Existing Sensitive Receptor Locations	
	ESR3	ESR4
Average Existing Noise Levels, dB L_{Aeq}	51*	49
Noise level of the operational activities at the ESR, dB L_{Aeq}	47	22
Ambient noise level, dB L_{Aeq}	**52**	**49**

***The noise levels observed during the second recording at monitoring location 2 are considered unrepresentative of normal noise levels at this location due to a dirt bike operating in the neighbouring field, therefore this has been excluded from the assessment**

4.2.3 Table 7 shows that the ambient noise level at each location is unlikely to exceed 55dB(A).

4.2.4 The guidance goes on to suggest that '*As a general rule, if the noise source is no more than 3dB higher than background noise levels, then Natural England accepts that it is unlikely to be significant'.*

4.2.5 Table 6 shows that the background noise will be exceeded by +9dB at ESR3 and 0dB at ESR4. It is therefore considered that some mitigation will be required to reduce noise levels at ESR 3.

4.3 Noise Impact Assessment Summary

4.3.1 The BS4142 Assessment and Natural England Assessment show that with no mitigation in place there is likely to be a low impact at ESR1, 2 and 4 due to the proposed development and a moderate impact at ESR3.

4.3.2 It is considered that mitigation should be implemented to reduce potential noise levels at ESR 2 by 8dB. This can be achieved with a wooden 2.5m wooden closed board fence or concrete block wall along the south western site boundary closest to the Langmead and Weston Levels SSSI.

4.3.3 With mitigation in place it is considered that the proposed development will have a low impact.

5 CONCLUSIONS

5.1.1 Wardell Armstrong has carried out a noise impact assessment to support the environmental permit application for waste transfer facility at Springway Industrial Estate, Westonzoyland Road, Westonzoyland, TA7 0JS.

5.1.2 There is potential for noise from the development to impact existing noise sensitive receptors in the vicinity of the proposed development. The noise sensitive receptors include residential receptors and two SSSIs which have been raised as concerns by Natural England.

5.1.3 The facility will be operational during the daytime only, therefore to establish baseline levels at existing sensitive receptors, an attended noise survey has been carried out during the daytime. Additional monitoring was undertaken at a similar Towens facility in Weston Super Mare in order to establish likely noise levels from the proposed development.

5.1.4 This report assesses the results of the noise survey carried out, together with the noise levels from the proposed operation, in accordance with current guidance. An assessment of the noise has been carried out in accordance with BS4142 and Natural England Guidance.

5.1.5 When considering the results of the BS4142 assessment in the context of the site and its setting, and the Natural England guidance, the noise generated by proposed development will have a low impact at ESR1, 2 and 3 with no mitigation in place. Therefore no mitigation has been recommended to reduce noise at these locations.

5.1.6 With no mitigation in place there may be a moderate impact on ESR 3. A 2.5m wooden closed board fence or concrete block wall is proposed along the south western boundary closest to the Langmead and Weston Levels SSSI to reduce potential noise levels to an acceptable level.

5.1.7 With mitigation in place it is considered that the proposed development will have a low impact.

APPENDICES

Appendix A

Natural England Report

Date: 07 July 2017
Our ref: DAS/2827

Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

0300 060 3900

BY EMAIL ONLY

Dear Rebecca Bomers

Discretionary Advice Service (Charged Advice)
DAS/216969
Development proposal and location: Former airfield, land off A372, Westonzoyland

Thank you for your consultation on the above which was received on 01 June 2017.

This advice is being provided as part of Natural England's Discretionary Advice Service. Towens Waste Management Ltd. has asked Natural England to provide advice upon:

- The potential impacts on designated sites within the vicinity of the proposed waste management facility. This is to inform an Environment Agency waste permit application.

This advice is provided in accordance with the Quotation and Agreement dated 14th June 2017 and is based upon the following information:

1. Outline of proposal. Supplied in an e-mail by Rebecca Bomers, Environment Manager, 8th June 2017.
2. Verbal Communication with Mr Towens & Rebecca Bomers. Site meeting, 21st June 2017.
3. Proposed permit details & Environment Agency Risk Assessment. Supplied in an e-mail by Rebecca Bomers, Environment Manager, 21st June 2017.

Site Report
Site description and context
This 1.21ha site is located within an industrial estate on a relict World War 2 (WW2) airfield. It is bounded by an access road to the south-east, arable cropping to the north-east and rough ground along its western boundary.

The footprint of the site is currently hard standing, with the exception of an old landfill where illegal tipping took place. This area is undergoing clearance and the proposal is to backfill and top with crushed stone. A slight incline of the site towards the south-west can be detected.

The area of hard standing is stacked with wooden pallets following previous occupancy. The pallets are in the process of being chipped and removed from site to a biomass boiler.

The site is serviced by an old drainage system associated with the WW2 airfield. This could potentially be nothing more than an old collapsed soak away but further investigations are proposed. The site is also supplied by mains water.

Project proposal description
Based on the information provided to date by Towens Waste Ltd., it is Natural England's understanding that applications will be submitted to the Environment Agency (EA) for an Environmental Permit (Waste management), and to Sedgemoor District Council for planning permission to construct and operate a waste management facility. The site is intended to be used for the following:

- Crushing hardcore to produce 6F5 product under the WRAP protocol
- Screen road planings to produce 6F4 under the WRAP protocol
- Chip clean wood to produce wood chip for biomass boilers
- Shred green waste for transfer to another site for composting
- Screen soils to produce manufactured top soil to PAS standard.

The above wastes are listed as 'non-hazardous' under EA Standard rules, Chapter 4, The environmental permitting (England and Wales) Regulations 2010. The exception being green waste and wood which by permit will require a sealed drainage system as a minimum mitigation measure. No further drainage is planned for the site.

To establish an environmental monitoring baseline Towens plan to collect groundwater, ditch water and soil samples from the surrounding land. No further monitoring is planned.

Fine particles will be suppressed by mist spraying to avoid dust spread. Towens Waste also own their own fleet of road sweepers and the site will be kept clean following vehicle movements.

Soil will be processed within a building which will potentially occupy the southern corner of the site. Bays for incoming waste will also occupy the southern edge of the site. Green waste (primarily plant clippings and tree branches) will be brought in fresh and will leave the site within 48hrs. Bays for waste transfer out of the site will occupy the north-eastern edge of the site.

The site is not connected to the main sewerage system and toilet and washing facilities will be via portable toilets. No machinery will be stored on the site overnight.

Designated Sites
Langmead and Weston Level Site of Special Scientific Interest (SSSI) is located approximately 250m south of the site at its nearest point, with King's Sedgemoor SSSI 2km to the south-east. These statutory nature conservation sites are of national importance.

Langmead and Weston Level SSSI is notified for its species-rich neutral grassland, aquatic flora and aquatic invertebrates associated with the lowland ditch system. A variety of wetland plants are present both in the water and on the banks to include the notable Frogbit (*Hydrocharis morsus-ranae*), Pondweeds (*Potamogeton* spp), and Water starworts (*Callitriche* spp). The ditch invertebrates recorded on the site include four nationally rare and twenty-one nationally scarce species, including three beetles.

King's Sedgemoor SSSI is also part of the Somerset Levels and Moors Special Protection Area (SPA) and Ramsar Site. The site attracts internationally significant numbers of water birds in winter (1 October to 31 March). The SPA, a statutory nature conservation site of international significance, is classified as such on the basis of its overwintering populations of Bewicks Swan (*Cygnus columbianus bewickii*), Golden Plover (*Pluvialis apricaria*),Teal (*Anas crecca*) and Lapwing (Vanellus vanellus), and a winter assemblage of 58,093 waterfowl. King's Sedgemoor is also one of a series of SSSI's which make up the Somerset Levels and Moors Ramsar Site. A designated wetland of international importance, the European site attracts internationally important numbers of wildfowl in winter and is one of the most important sites in southern Britain for breeding waders. This inland European site is also used by birds from the Severn Estuary Special Protection Area (SPA) and Ramsar Site, as alternative winter feeding grounds. The network of rhynes and ditches on King's Sedgemoor support an outstanding assemblage of aquatic invertebrates.

Potential effects on designated sites
The principal issues for consideration are:

- Noise
- Leachates/surface runoff
- Particulates

Noise effects
The operational phase of waste processing, most notably aggregate crushing and wood chipping will generate high levels of noise which has the potential to be wide reaching. Water birds are sensitive to noise disturbance.

Natural England guidance currently suggests that birds begin to react to a noise level of above 55dB. As a general rule, if the noise source is no more than 3dB higher than background noise levels, then Natural England accepts that it is unlikely to be significant. However, knowledge of the site indicates low use of Langmead and Weston Level SSSI by SPA and Ramsar wetland birds, as potentially the land could offer supporting habitat to these European Site qualifying species.

King's Sedgemoor is approximately 2 km away from the proposed waste treatment facility site boundary. The distance from King's Sedgemoor will is likely to limit the potential noise effects on Somerset Levels and Moor's SPA, Ramsar and SSSI species. That said a 'noise and vibration management plan' is required as part of any waste permit application where sites are likely to cause pollution outside of the side, and it will need to provide information to conclusively rule out any negative impacts on the SPAs, Ramsar Sites and component and non-component SSSIs.

Leachates/surface runoff
The main risk is potential pollution and site run off effecting environmental receptors, in particular entering the surrounding ditch system associated with Langmead and Weston Level SSSI.

The site is principally under hard standing which inclines slightly towards the south-west. An area of rough ground divides the site from the SSSI, the boundary of which is marked by a several metre high bank lined with trees and scrub which in itself acts as a natural bund and screen. A clear height differential exists between the site and the SSSI, as the land drops down to the SSSI.

The main opportunity for surface water leaving the site and entering the ditch water system would potentially be in high flood events. This could present an issue with increased surface water flow following the line of a farm track leaving the site. An interception system would mitigate the effects on notified features. Consideration should be given to the potential for drainage in the site design. Further drainage studies to investigate estimated flow rates of surface water runoff in flood conditions would also help confirm if additional surface water drainage is required.

Green waste and wood will require a sealed drainage system. If a high volume of water passes through the sealed drainage system during flood conditions without suitable storage capacity there is a risk, albeit a low risk, that leachates may eventually reach the ditch system. This along with particulates leaving the site pose the main risks as far as contaminants are concerned.

Dust and aggregate particulates
Particulates leaving the site via surface water has been considered in the section above.

Particulate fall out from wind-borne material is also a consideration. Prevailing winds west to east would carry particulates away from the SSSI in the main. Airborne pollution should be prevented on days when winds carry particulates north to south towards the SSSI. Suppressing fine particles through mist spraying when working aggregates will go some way to alleviate this. The site is screened from the SSSI by a high bank with tall mature scrub and trees, which is potentially also adequate to mitigate the effects in average wind conditions. As this bank falls outside of Towens land ownership replacement screening may need to be provided in the future and should be a condition of the development.

Summary
Based on the information provided to date Natural England considers that the operations proposed pose potential pollution risks to nearby SSSIs.. We have highlighted potential avoidance and mitigation measures that need further consideration to ensure that those risks are addressed and to inform any formal applications and consents that are progressed.

Annex 1.
Advice around protected species has not been requested as part of the DAS contract. However the site and surrounding land offers good habitat for reptiles. The use of the site by Adders was also noted in verbal communication with Rebecca Bomers the Waste Manager. Adder, Grass snake, Common lizard and Slow Worm are all protected by UK law and could be utilising the site. Please refer to Natural England's Standing Advice to assist in deciding what survey and mitigation measures would be appropriate for the development.

For clarification of any points in this letter, please contact Judith Weightman on 02080262317.

This letter concludes Natural England's Advice within the Quotation and Agreement dated 14th June 2017.

As the Discretionary Advice Service is a new service, we would appreciate your feedback to help shape this service. We have attached a feedback form to this letter and would welcome any comments you might have about our service.

☒ The advice provided in this letter has been through Natural England's Quality Assurance process

The advice provided within the Discretionary Advice Service is the professional advice of the Natural England adviser named below. It is the best advice that can be given based on the information provided so far. Its quality and detail is dependent upon the quality and depth of the information which has been provided. It does not constitute a statutory response or decision, which will be made by Natural England acting corporately in its role as statutory consultee to the competent authority after an application has been submitted. The advice given is therefore not binding in any way and is provided without prejudice to the consideration of any statutory consultation response or decision which may be made by Natural England in due course. The final judgement on any proposals by Natural England is reserved until an application is made and will be made on the information then available, including any modifications to the proposal made after receipt of discretionary advice. All pre-application advice is subject to review and revision in the light of changes in relevant considerations, including changes in relation to the facts, scientific knowledge/evidence, policy, guidance or law. Natural England will not accept any liability for the accuracy, adequacy or completeness of, nor will any express or implied warranty be given for, the advice. This exclusion does not extend to any fraudulent misrepresentation made by or on behalf of Natural England.

Yours sincerely

Judith Weightman
Somerset Levels & Moors Conservation Team

Cc commercialservices@naturalengland.org.uk

Annex 1
European Protected Species

A licence is required in order to carry out any works that involve certain activities such as capturing the animals, disturbance, or damaging or destroying their resting or breeding places. Note that damage or destruction of a breeding site or resting place is an absolute offence and unless the offences can be avoided (e.g. by timing the works appropriately), it should be licensed. In the first instance it is for the developer to decide whether a species licence will be needed. The developer may need to engage specialist advice in making this decision. A licence may be needed to carry out mitigation work as well as for impacts directly connected with a development. Further information can be found in Natural England's 'How to get a licence' publication.

If the application requires planning permission, it is for the local planning authority to consider whether the permission would offend against Article 12(1) of the Habitats Directive, and if so, whether the application would be likely to receive a licence. This should be based on the advice Natural England provides at formal consultation on the likely impacts on favourable conservation status and Natural England's guidance on how the three tests (no alternative solutions, imperative reasons of overriding public interest and maintenance of favourable conservation status) are applied when considering licence applications.

Natural England's pre-submission Screening Service can screen application drafts prior to formal submission, whether or not the relevant planning permission is already in place. Screening will help applicants by making an assessment of whether the draft application is likely to meet licensing requirements, and, if necessary, provide specific guidance on how to address any shortfalls. The advice should help developers and ecological consultants to better manage the risks or costs they may face in having to wait until the formal submission stage after planning permission is secured, or in responding to requests for further information following an initial formal application.

The service will be available for new applications, resubmissions or modifications – depending on customer requirements. More information can be found on Natural England's website.

Appendix B

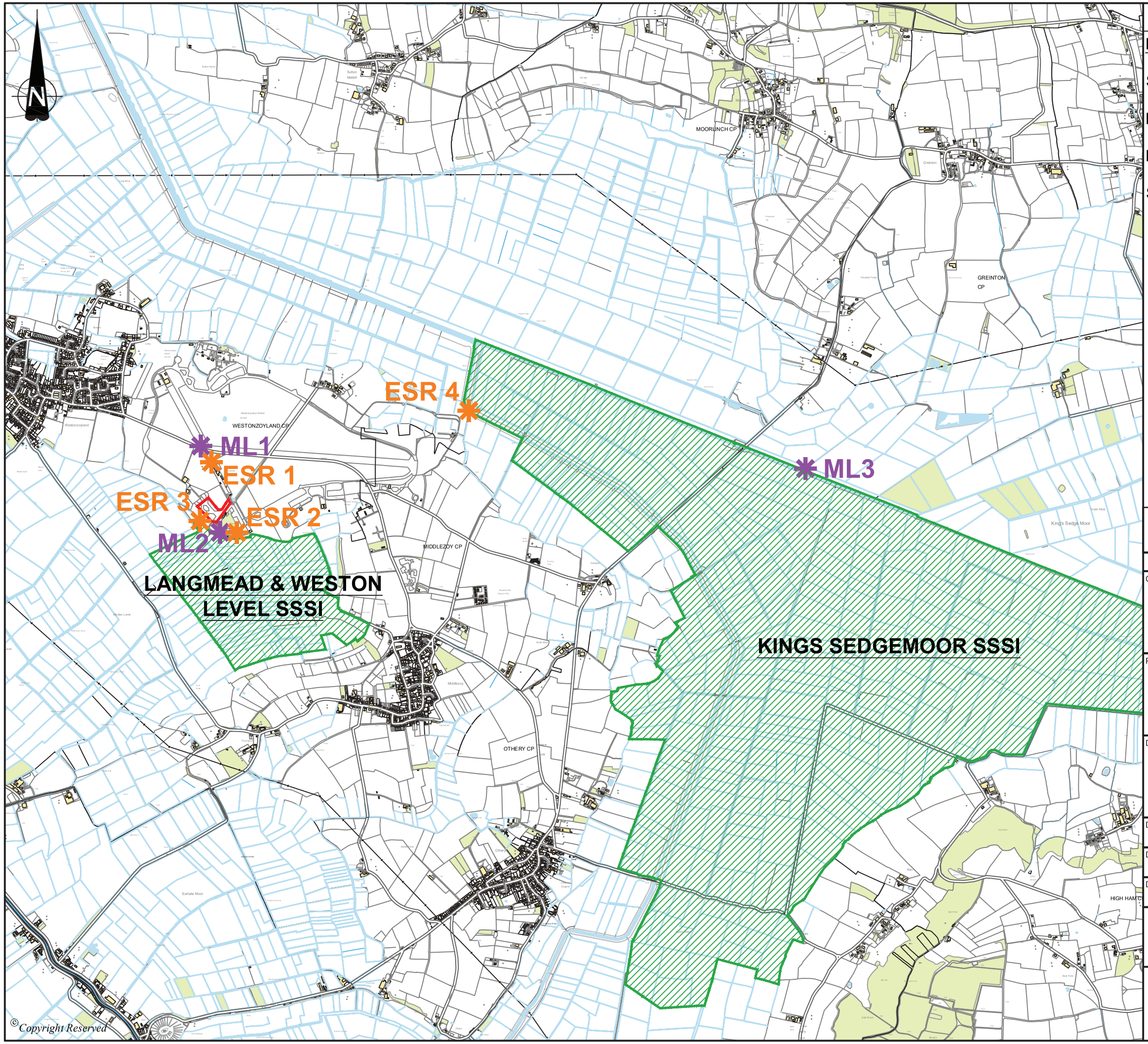
Noise Monitoring Results

Appendix A

Noise Monitoring Results

Monitoring Location 1 – Approximately 250m north of the site boundary and 20m north of the A372						
Time	**L_{Aeq} (dB)**	**$L_{A\ min}$ (dB)**	**$L_{A\ max}$ (dB)**	**L_{A90} (dB)**	**L_{A10} (dB)**	**Comments**
08/09/2016 - Daytime						
1128-1228	61.7	33.0	85.4	41.3	66.1	Road noise. Occasional aircraft.
1228-1328	61.7	33.0	85.4	39.7	66.0	
Monitoring Location 2 –Approximately 50m south of site boundary, adjacent to Langmead & Weston Levels SSSI boundary and residential area						
Time	**L_{Aeq} (dB)**	**$L_{A\ min}$ (dB)**	**$L_{A\ max}$ (dB)**	**L_{A90} (dB)**	**L_{A10} (dB)**	**Comments**
08/09/2016 - Daytime						
1344-1444	51.3	37.3	73.6	44.2	53.6	Distant traffic noise.
1444-1544	73.7	40.9	96.4	47.7	64.1	Some noise. Noise from existing industrial activities. Dirt bike in adjacent field from 14.48 until 15.37
Monitoring Location 3 – Approximately 3.8km to the east of the site boundary, within Kings Sedgemoor SSSI						
Time	**L_{Aeq} (dB)**	**$L_{A\ min}$ (dB)**	**$L_{A\ max}$ (dB)**	**L_{A90} (dB)**	**L_{A10} (dB)**	**Comments**
14/09/2016 - Daytime						
1156-1256	49.2	31.3	58.4	34.0	46.1	Distant traffic noise. Birdsong.
1256-1356	48.7	32.4	59.7	35.1	45.4	
Monitoring Location 4 – Approximately 5m from existing Towens waste treatment facility on Warne Road, Weston Super Mare						
Time	**L_{Aeq} (dB)**	**$L_{A\ min}$ (dB)**	**$L_{A\ max}$ (dB)**	**L_{A90} (dB)**	**L_{A10} (dB)**	**Comments**
14/09/2016 - Daytime						
15.07-15.09	73.6	70.4	80.1	71.0	75.5	Noise from vehicle movements and crusher

DRAWINGS



DO NOT SCALE FROM THIS DRAWING

REFERENCE

Site boundary

Noise monitoring locations ML1

Existing sensitive receptors ESR 1

SSSI locations

REVISION	DETAILS	DATE	DR'N	CHK'D	APP'D

CLIENT

TOWENS OF WESTON Ltd.

PROJECT

WESTONZOYLAND
WASTE TRANSFER STATION

DRAWING TITLE

NOISE MONITORING LOCATIONS PLAN

DRG No.		REV
CA11269-001		
DRG SIZE	SCALE	DATE
A3	1:25,000	25/09/17
DRAWN BY	CHECKED BY	APPROVED BY
RJH	RP	SW

■ CARDIFF TEL 029 2072 9191 WEB: WWW.WARDELL-ARMSTRONG.COM

☐ BIRMINGHAM ☐ CARLISLE ☐ CROYDON ☐ EDINBURGH
☐ GLASGOW ☐ LEIGH ☐ LONDON ☐ MANCHESTER
☐ NEWCASTLE UPON TYNE ☐ SHEFFIELD ☐ STOKE-ON-TRENT ☐ TAUNTON

wardell armstrong your earth our world

N:\CA\CA11269 - WESTONZOYLAND\03 - DESIGN\AUTOCAD\CA11269-001 NOISE MONITORING LOCATIONS.DWG

Former Aerodrome
Westonzoyland, Bridgwater, Somerset

Ecological Appraisal

September 2017

Document control sheet

Client	Towens of Weston Ltd
Project	Former Aerodrome, A372, Westonzoyland, Bridgwater, Somerset, TA7 0JS
Title	Ecological Appraisal
Reference	I260_2017_I127
Grid reference	ST 36208 34030
Survey date(s)	6th September 2017
Surveyor	Olivia Barnes, First Ecology, Assistant Ecologist, BSc.
Planning reference	Sedgemoor District Council, reference number 99/17/00230/LE

Original	Name	Position	Signature	Date
Author	Olivia Barnes	**First Ecology** Assistant Ecologist		September 2017
Reviewed by	Helen Ward	**First Ecology** Consultancy Manager		September 2017
Approved by	Helen Ward	**First Ecology** Consultancy Manager		September 2017

Contents

Executive summary

Towens of Weston Ltd is seeking full planning permission for the development of a new waste management facility located to the south of the A372, Westonzoyland, Bridgwater, Somerset, TA7 0JS, centred on national grid reference ST 36208 34030.

First Ecology were commissioned to undertake a preliminary ecological appraisal of the site to identify any potential ecological constraints and provide an indication of the further survey and mitigation works required for the development to proceed in accordance with planning policy and wildlife legislation.

The desk study confirmed the absence of statutory and non-statutory designated sites of conservation importance within and adjacent to the site. However, there were three statutory Sites of Special Scientific Interest (SSSI), one Ramsar and Special Protection Area (SPA) designated site, four non-statutory Local Wildlife Sites (LWS) and records of 19 legally protected species within a 2km radius of the site.

The site survey identified a total of seven standard Phase 1 habitat types; broadleaved parkland/scattered trees, tall herb and fern – ruderal, spoil, amenity grassland, ephemeral/short perennial vegetation, wall and bare ground. Several mature trees were considered to provide potential nest sites for species of bird but these will be retained and protected during and post development; and reptile artificial refuge surveys confirmed the likely absence of reptiles within the site. Therefore, no further survey or mitigation measures are required in relation to protected species at this time.

Further ecological consultation should be sought if the scope of the proposed work changes significantly or if the onset of the work is delayed by more than 12 months from the date of the most recent survey.

1.0 Introduction

1.1 Site location

1.1.1 The site is located within an industrial estate, on the site of a relict World War 2 aerodrome, to the south of the A372, Westonzoyland, Bridgwater, Somerset, TA7 0JS, centred on national grid reference ST 36208 34030.

1.2 Background to the activity/development

1.2.1 Towens of Weston Ltd is seeking full planning permission for the development of the site, previously used as an illegal refuse tip, into a waste management facility (Sedgemoor District Council reference number 99/17/00230/LE). The proposed development will involve:

- Land clearance and disposal or recycling of waste from previous occupancy.
- Backfilling and topping areas of non-hardstanding with crushed stone.
- Construction of basic infrastructure, including a building for soil processing and waste containment bays.

1.2.2 In support of the planning application for the development of the site Towens of Weston Ltd. commissioned Natural England to provide advice upon the potential impacts on designated sites within the vicinity of the proposed waste management facility to inform an Environment Agency waste permit application (Natural England reference number DAS/216969).

1.2.3 Furthermore First Ecology was commissioned to undertake an ecological appraisal to identify any apparent or potential ecological constraints to the proposed development and provide recommendations, as appropriate, to enable compliance with planning policy and wildlife legislation.

1.3 Survey objectives

1.3.1 The survey objectives are listed as follows:

- Identify all relevant statutory and non-statutory designated areas of conservation importance and features of ecological significance within the site and within a 2km radius of the site.
- Broadly categorise habitat types within the site in accordance with standard Phase 1 habitat survey techniques.
- Assess the potential for the presence of protected species and species of principal conservation importance within the site.
- Accurately assess the potential ecological impact of the proposed development.
- Inform the design of a mitigation strategy, if necessary, to minimise potential impacts on protected species and habitats.
- Advise of any ecological compensation requirements.

2.0 Methodology

2.1 Desk study

2.1.1 The desk study involved the compilation of ecological information relating to the site and surrounding area within a 2km radius of the site. The resources consulted included the following:

- Somerset Environmental Records centre (SERC) was commissioned to conduct a data search for statutory and non-statutory designated sites of conservation importance[1] and legally protected and biodiversity priority species, red data book species and county notable species.
- The Natural England website was visited to obtain citation details of the statutory designated sites.
- The Multi-Agency Geographic Information for the Countryside (MAGIC) website was consulted to identify designated conservation sites and Biodiversity Action Plan (BAP) priority habitats.
- Ordnance Survey master maps and aerial photographs were used to identify habitats of potential value to protected species including woodlands, lines of trees, hedgerows, scrub, areas of grassland and waterbodies.

2.2 Preliminary ecological appraisal

2.2.1 The survey was completed in accordance with best practice methodologies:

- Joint Nature Conservation Committee (2003). Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit. Joint Nature Conservation Committee, Peterborough.
- British Standards Institution (2013). BS42020: Biodiversity Code of Practice for Planning and Development. British Standards Institution, London.

2.2.2 The site survey was undertaken on the 6th September 2017 by Olivia Barnes, First Ecology, Assistant Ecologist, Bachelor of Science (BSc.).

2.2.3 During the survey the following information was recorded:

- Habitat types classified in accordance with standard Phase 1 habitat categories.
- Dominant, notable and invasive, non-native plant species.
- Direct evidence of protected and notable animal species.
- Features of value for protected and notable animal species.

2.3 Reptiles

2.3.1 The artificial refuge surveys were completed in accordance with best practice methodologies:

- Froglife (1999) Reptile survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, London.
- Gent, A. H. and Gibson, S. D. (2003). Herpetofauna Workers' Manual, 2nd Edition. Joint Nature Conservation Committee, Peterborough.
- Herpetofauna Groups of Britain and Ireland (1998). Evaluating local mitigation/translocation programmes: Maintaining best practice and lawful standards. HGBI advisory notes for Amphibian and Reptile Groups (ARGs). HGBI, c/o Froglife, Halesworth.

[1] Evaluated statutory designated areas are Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar Sites, Sites of Special Scientific Interest (SSSI), Marine Protected Areas (MPA), National Nature Reserves (NNR), Local Nature Reserves (LNR) and National Parks. Evaluated non-statutory designations included Local Wildlife Sites (LWS) and Local Geological Sites (LGS).

2.3.2 The artificial refuge search surveys were undertaken in the period from the 13-28th September 2017 by three surveyors:

- Helen Ward, First Ecology, Consultancy Manager, BSc, full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM).
- Steph Bentham-Green, First Ecology, Ecologist, BSc, and qualifying member of the CIEEM.
- Olivia Barnes, First Ecology, Assistant Ecologist and BSc.

2.3.3 The surveys consisted of deploying 10 artificial refuges (i.e. 0.5m^2 roofing felt) along the northern boundary of the site on the 6th September 2017. Refuges were left for a period of seven days to weather and become familiar to, and used by, any reptiles within the site. The refuges and any naturally occurring refuges (e.g. spoil piles) were then checked on seven separate occasions to establish the presence or likely absence of reptiles in suitable weather conditions.

2.4 Constraints

2.4.1 Preliminary ecological appraisals are not intended to produce comprehensive lists of species present but, nevertheless, it is considered that the survey undertaken is sufficient to evaluate the ecological resources within the site and thus to identify potential issues of relevance to the development proposal.

3.0 Results

3.1 Statutory and non-statutory designated sites

3.1.1 No designated sites of conservation importance intersect or adjoin the proposed development site. However, Langmead and Weston Level Site of Special Scientific Interest (SSSI) is located approximately 250m south of the site. In addition, King's Sedgemoor SSSI, Greylake SSSI, Somerset Levels and Moors Ramsar and Special Protection Area (SPA) and four non-statutory designated Local Wildlife Sites (LWS) are also located within the 2km site radius search area (Tables 1 and 2).

Table 1. Statutory designated sites of conservation importance within a 2km radius of the site.

Name	Status	Location	Description
Langmead and Weston Level	SSSI	ST357332	Species-rich neutral grassland/grazing marsh and ditch systems forming part of the Somerset Levels and Moors.
King's Sedgemoor	SSSI	ST401330	A wide variety of neutral grasslands and wetter fields, forming part of an extensive grazing marsh/grasslands and ditch systems of the Somerset Levels and Moors.
Greylake	SSSI	ST385336	Low-lying arable farmland and geological Site of Special Scientific Interest.
Somerset Levels and Moors	RAMSAR SPA	ST399351	Extensive clay-based coastal plains and peat-based marshes.
Key			
SPA	Special Protection Area		
SSSI	Site of Special Scientific Interest		

Table 2. Non-statutory designated sites of conservation importance within a 2km radius of the site.

Name	Status	Location	Description
Lang Moor	LWS	ST33	Improved grassland with extensive rhyne system.
Weston Level	LWS	ST33	Unimproved wet grassland with species-rich rhynes.
Pigditch Rhyne network	LWS	ST33	Unimproved species-rich grassland and ditches with legally protected species.
Greylake RSPB Reserve	LWS	ST33	Low-lying arable farmland and geological Site of Special Scientific Interest.
Key			
LWS	Local Wildlife Site		

3.1.2 The site is located within the impact risk zone of Langmead and Weston Level SSSI and the proposal falls into the category of waste development "*Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management*".

3.1.3 Therefore, Natural England has been consulted on the likely risks to the identified designated site (Natural England reference number DAS/216969). Based on the information provided up until the 7th July 2017 Natural England considers that the operations proposed pose potential pollution risks to the Langmead and Weston Level SSSI through noise effects, leachates/surface runoff, and dust and aggregate particulates. However, providing the highlighted potential avoidance and mitigation measures are implemented all risks are manageable.

3.2 Biodiversity Action Plan priority habitats and habitats of principal importance

3.2.1 There are no Biodiversity Action Plan (BAP) priority habitats or habitats of principal importance within the site. However, SERC identified coastal and floodplain grazing marsh priority habitat within a 2km radius of the site; and the MAGIC website highlighted the likely occurrence of arable field margins, hedgerows, lowland meadows and coastal and floodplain grazing priority habitats within a 2km radius of the site.

3.3 Protected species records

3.3.1 The data search returned records of 19 protected species within a 2km radius of the site (Table 3).

Table 3. Summary of protected species records within a 2km radius of the site.

Common name	Scientific name	EU protected	EU priority	UK protected	Amber birds	BAP2007	LBAP2009	County notable
Bats								
Brown long-eared bat	*Plecotus auritus*	*		*		*	*	*
Common pipistrelle	*Pipistrellus pipistrellus*	*		*			*	*
Serotine	*Eptesicus serotinus*	*		*			*	*
Soprano pipistrelle	*Pipistrellus pygmaeus*	*		*			*	*
Noctule	*Nyctalus noctula*	*		*			*	*
Birds (schedule 1)								
Bewick's swan	*Cygnus columbianus*	*	*	*	*			*
Bee-eater	*Merops apiaster*	*		*				
Cetti's warbler	*Cettia cetti*			*				*
Fieldfare	*Turdus pilaris*			*				*
Little ringed plover	*Charadrius dubius*	*		*				*
Pintail	*Anas acuta*	*		*	*			*
Whimbrel	*Numenius phaeopus*	*		*				
Whooper swan	*Cygnus cygnus*	*	*	*	*			*
Mammals								
Eurasian badger	*Meles meles*			*				*
European otter	*Lutra lutra*	*		*		*	*	*
European water vole	*Arvicola amphibius*			*		*	*	*
Reptiles								
Adder	*Vipera berus*			*		*	*	*
Common lizard	*Zootoca vivipara*			*		*	*	*
Grass snake	*Natrix natrix*			*		*	*	*

3.4 Site/habitat description

3.4.1 The survey identified seven standard Phase 1 habitat types within the site boundary (Photos 1-7 and Figure 1).

- **Broadleaved parkland/scattered trees (A3.1).** There were immature and mature trees along the northern boundary of the site. Species included wild cherry (*Prunus avium*), field maple (*Acer campestre*), goat willow (*Salix caprea*) and ash (*Fraxinus excelsior*) (Photo 1).

- **Other tall herb and fern - ruderal (C3.1).** There were areas of tall ruderal herbs along the northern boundary of the site. The dominant species were nettle (*Urtica dioica*) and creeping thistle (*Cirsium arvense*) (Photo 2).
- **Spoil (I2.2).** The site was dominated by numerous spoil piles consisting of varying materials, including soil, woodchip, waste and broken wooden pallets, tarmac rubble, brick/paving slab rubble, concrete rubble and waste metal (Photo 3).
- **Cultivated/disturbed land – amenity grassland (J1.2).** There was a narrow strip of amenity grassland field margin along the northern boundary. The sward comprised of a limited range of grasses including cock's foot (*Dactylis glomerata*), annual meadow-grass (*Poa annua*) and perennial rye-grass (*Lolium perenne*) and a few common forbs such as ribwort plantain (*Plantago lanceolata*), dandelion (*Taraxacum agg.*) and ragwort (*Jacobaea vulgaris*) (Photo 4).
- **Cultivated/disturbed land – ephemeral/short perennial (J1.3).** There were small marginal areas of ephemeral/short perennial herbs along the northern boundary adjacent to the neighbouring arable field. The species present included ribwort plantain, unscented mayweed (*Matricaria chamomilla*), dyer's rocket (*Reseda luteola*) and black nightshade (*Solanum nigrum*) (Photo 5).
- **Wall (J2.5).** There was a newly erected wall and containment bays constructed of concrete blocks along the southeastern boundary adjacent to the Springway Lane Business Park access road and a section of wall along the northern boundary of the site (Photo 6).
- **Bare ground (J4)**. There were extensive areas of bare ground across the site, due to ongoing clearance and development, including bare earth, compacted rubble and concrete hard standing. There were also areas of newly laid concrete hard standing (Photo 7).

3.5 Birds

3.5.1 The species observed on site during the survey included wood pigeon (*Columba palumbus*) and pied wagtail (*Motacilla alba*). In addition, several of the mature trees along the northern boundary of the site provide potential nest site locations. However, these trees will be retained and protected during and post development and therefore no impacts are anticipated and no mitigation measures are required in relation to species of bird at this time.

3.5.2 All species of bird whilst actively nesting are afforded legal protection under the Wildlife and Countryside Act 1981 (as amended) and additional penalties are incurred for offences relating to birds listed on Schedule 1 (Appendix A).

3.6 Reptiles

3.6.1 The site was considered to provide potentially suitable habitat for viviparous lizard (*Zootoca vivipara*), slow-worm (*Anguis fragilis*) and grass snake (*Natrix natrix*). Habitat features within the site of potential value for reptiles were as follows:

- Open areas of bare ground for basking near sheltered, vegetated areas and spoil piles for daytime refuge were located along the northern boundary of the site.
- Spoil piles located across the site suitable as night-time refuges or hibernation sites.
- Amenity grassland, ephemeral/short perennial herbs and tall ruderal vegetation located along the northern boundary providing foraging opportunities.

3.6.2 However, despite the presence of suitable habitat, the artificial refuge survey confirmed the likely absence of reptiles within the site and therefore no mitigation measures are required in relation to species of reptile at this time (Table 4).

Table 4. Summary of reptile survey results.

Visit details			Weather conditions				Reptiles		
Number	**Date**	**Time**	**Air temperature (°C)**	**Wind (direction/speed (mph))**	**Precipitation**	**Cloud cover (%)**	**Grass snake**	**Slow-worm**	**Viviparous lizard**
1	13/09/2017	10:00 – 10:15	15	W/19	0	90	0	0	0
2	15/09/2017	15:00-15:15	14	N/9	Light shower	99	0	0	0
3	18/09/2017	16:00- 16:15	16	WNW/10	0	50	0	0	0
4	20/09/2017	10:10-10:25	16	SSW/10	0	50	0	0	0
5	22/09/2017	16:00-16:15	16	S/12	0	80	0	0	0
6	26/09/2017	16:00-16:20	18	ESE/2	0	65	0	0	0
7	28/09/2017	10:00- 10:15	15	SSW/4	0	20	0	0	0

3.6.3 Common reptiles are afforded limited legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). They are also listed as species of principal importance under section 41 of the NERC Act 2006 (as amended) (Appendix A).

3.7 Other protected species

3.7.1 No protected or invasive, non-native species of plant were identified and the habitats within the site which will be impacted by the proposed development were not deemed to provide critical resources for any other protected or notable species of animal. In particular, species which are considered likely to be absent from the site or may be present but will not be adversely impacted by the proposed development are as follows:

- Great crested newts (*Triturus cristatus*)
- Badgers (*Meles meles*)
- Bats (Rhinolophidae and vespertilionidae)
- Dormice (*Muscardinus avellanarius*)
- Otters (*Lutra lutra*)
- Water voles (*Arvicola amphibious*)
- White-clawed crayfish (*Austropotamobius pallipes*)

4.0 Method statement

4.1 Phase 1 habitat types

4.1.1 The mature and immature trees along the northern boundary of the site will be retained and protected during and post development.

4.1.2 Prior to the construction phase the trees will be protected by barrier fencing installed to demarcate the greater of the root protection area or canopy spread of the trees. The barrier fencing will comprise of 2m tall welded mesh panels on rubber or concrete feet will provide an adequate level of protection from vehicles, pedestrians and manually operated plant. The fence panels will be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers will be at least 1m and will be uniform throughout the fence. The areas protected by barrier fencing will be regarded as an exclusion zone, within which there will be no groundwork, construction, no materials stored, fires lit of other activities undertaken that could be harmful or injurious to the retained trees or their root systems. The barrier fencing will remain in place until the completion of the development.

4.1.3 On completion of the development the barrier fencing will be removed and, if necessary, be replaced by a permanent post and rail fence positioned to take account of the maximum size of the trees.

4.2 Survey updates

4.2.1 Further ecological consultation should be sought if the scope of the proposed work changes significantly or if the onset of the work is delayed by more than 12 months from the date of the most recent survey.

5.0 References and bibliography

5.1 Publications

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5.1.2 Bickmore, C.J. (2002). Hedgerow survey handbook: a standard procedure for local surveys in the UK. DEFRA, London.
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5.1.4 British Standards Institution (2012). BS5837: Guide for trees in relation to design, demolition and construction. British Standards Institution, London.
5.1.5 Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition). Bat Conservation Trust, London
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5.1.7 Edgar, P., Foster, J. and Baker, J. (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth.
5.1.8 External Relations Team English Nature (2004). Reptiles: Guidelines for Developers.
5.1.9 External Relations Team English Nature (2006). The Dormouse Conservation Handbook, 2nd Edition.
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5.1.11 Gent, A. H. and Gibson, S. D. (2003). Herpetofauna Workers' Manual, 2nd Edition. Joint Nature Conservation Committee, Peterborough.
5.1.12 Joint Nature Conservation Committee (2004). Common Standards Monitoring Guidance for Reptiles and Amphibians. Joint Nature Conservation Committee, Peterborough.
5.1.13 Joint Nature Conservation Committee (2003). Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit. Joint Nature Conservation Committee, Peterborough.
5.1.14 Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001). Great Crested Newt Conservation Handbook, Froglife, Halesworth.
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5.1.17 Natural England. Standing Advice Species Sheet: Great crested newts.
5.1.18 Natural England. Standing Advice Sheet: Eurasian Otter.
5.1.19 Natural England. Standing Advice Species Sheet: White-clawed crayfish.
5.1.20 Oldham R. S., Keeble J., Swan M. J. S. and Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal. 10. (4). 143-155.
5.1.21 Herpetofauna Groups of Britain and Ireland (1998). *Evaluating* local mitigation/translocation programmes: Maintaining best practice and lawful standards. HGBI advisory notes for Amphibian and Reptile Groups (ARGs). HGBI, c/o Froglife, Halesworth.
5.1.22 Natural England (2014). Standing Advice Species Sheet: Breeding birds (including barn owl).
5.1.23 Natural England (2014). Standing Advice Species Sheet: Reptiles.
5.1.24 Strachan, R. Moorhouse, T. and Gelling, M. (2011). Water Vole Conservation Handbook – 3rd Edition. Wildlife Conservation Research Unit, Oxford.

5.2 Websites

5.2.1 http://www.magic.gov.uk

6.0 Photographs

Photo 1. Scattered mature trees along the northern boundary of the site.

Photo 2. Area of tall ruderal herbs located along the northern boundary of the site.

Photo 3. Spoil pile consisting of soil and rubble, located in the southern corner of the site.

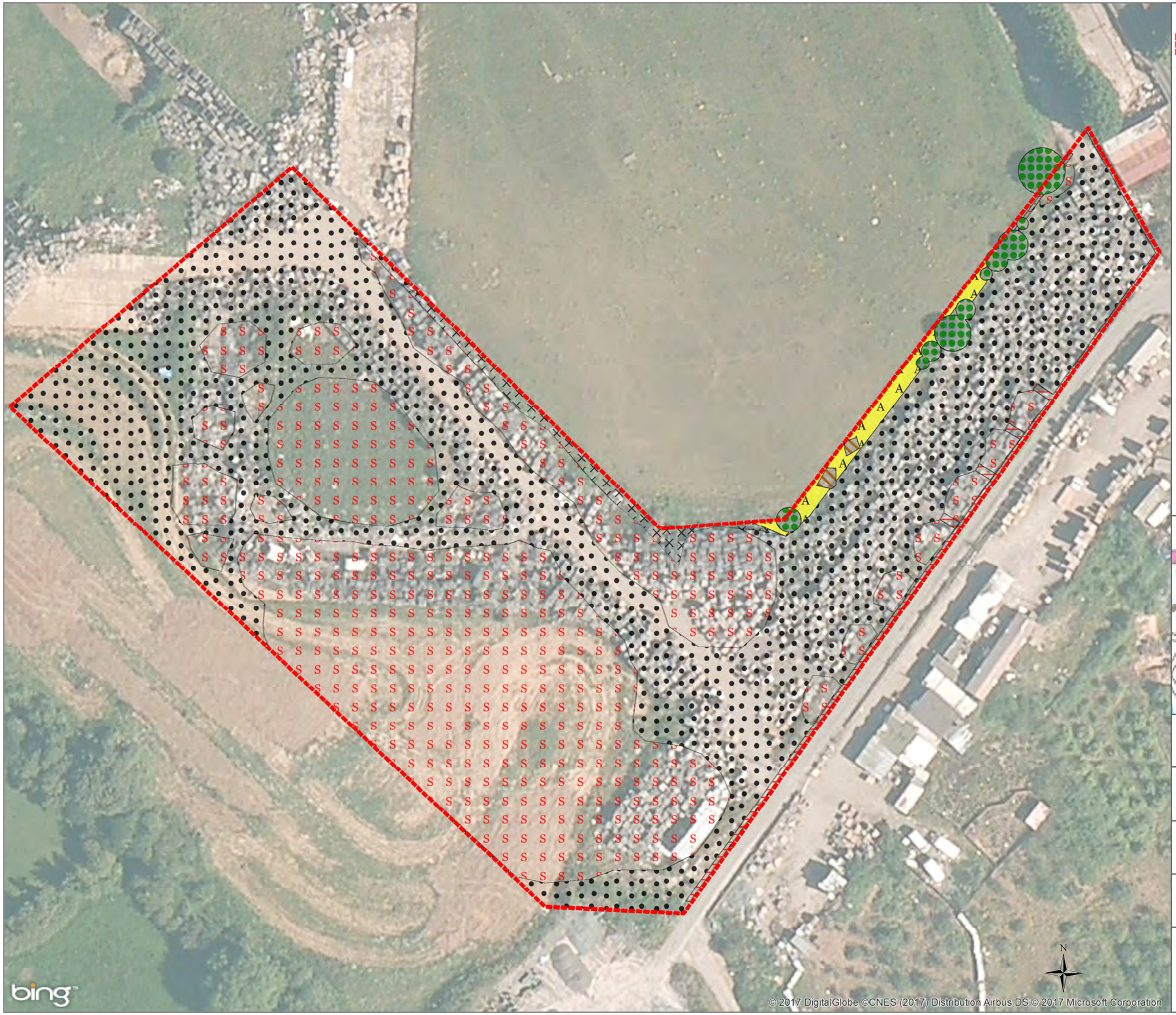
Photo 4. Narrow strip of amenity grassland margin located along the northern boundary of the site.

Photo 5. Ephemeral/short perennial vegetation along the northern boundary of the site.

Photo 6. Newly erected wall constructed of concrete blocks along the northern boundary of the site.

	No photograph
Photo 7. Extensive area of bare ground loacted in the centre of the site.	

Figures



Legend

- Boundary
- A3.1 Broadleaved Parkland/scattered trees
- C3.1 Other tall herb and fern - ruderal
- I2.2 Spoil
- J1.2 Cultivated/disturbed land - amenity grassland
- J1.3 Cultivated/disturbed land - ephemeral/short perennial
- J2.5 Wall
- J4 Bare ground

Project
Former Aerodrome, A372, Westonzoyland, Bridgwater, Somerset, TA7 0JS, ST 36208 34030

Drawing
Preliminary ecological appraisal plan

Project reference	Drawing number
I260_2017_I127	**Figure 1**

Scale	Date	Drawn by
1:700	**28/09/2017**	**helen.ward**

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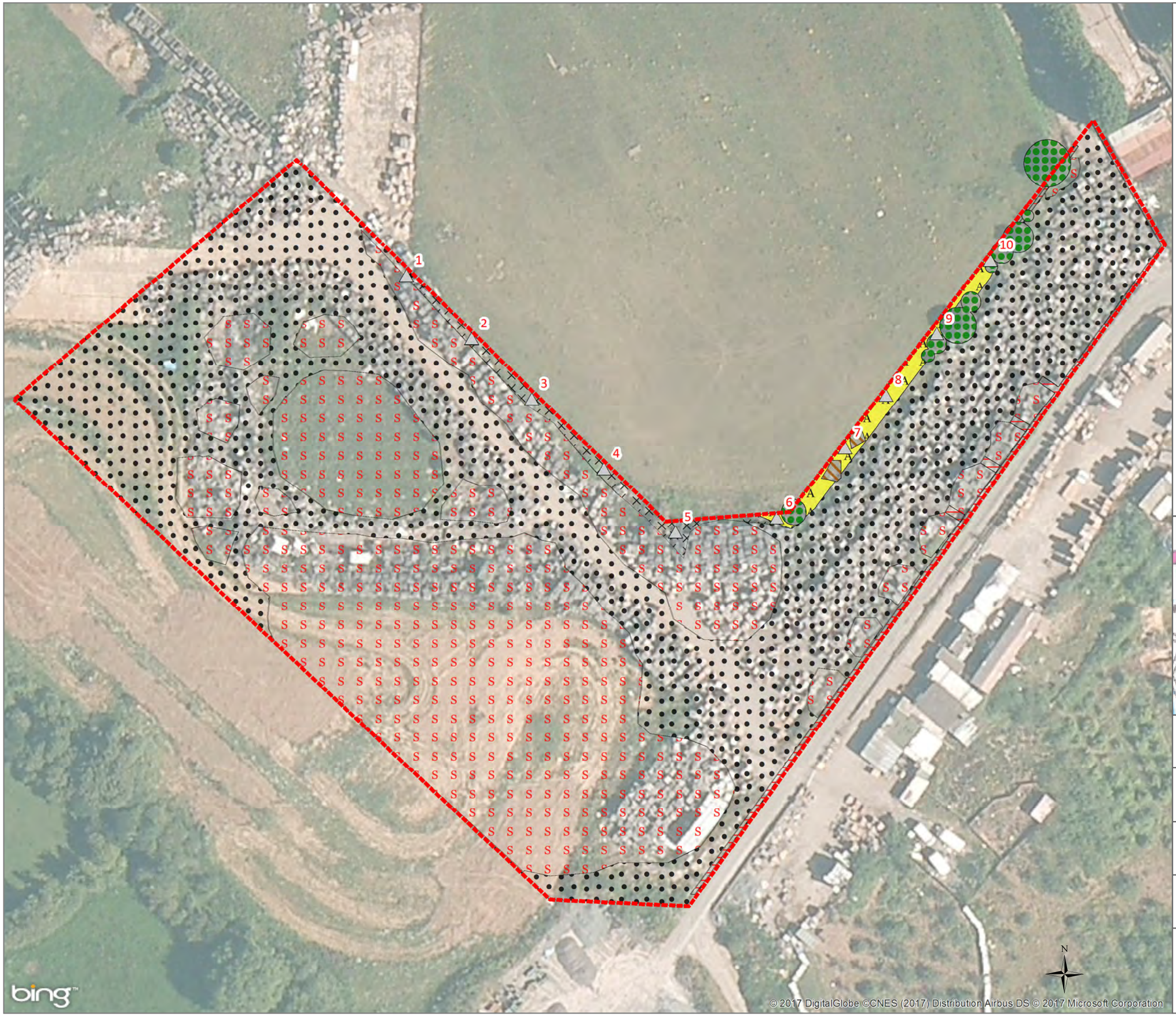

Legend

- Boundary
- A3.1 Broadleaved Parkland/scattered trees
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- J1.3 Cultivated/disturbed land - ephemeral/short perennial
- J2.5 Wall
- J4 Bare ground
- Reptile - artificial refuge

Project
Former Aerodrome, A372, Westonzoyland, Bridgwater, Somerset, TA7 0JS, ST 36208 34030

Drawing
Reptile activity plan

Project reference	Drawing number
I260_2017_I127	**Figure 2**

Scale	Date	Drawn by
1:700	**28/09/2017**	**helen.ward**

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Appendices

Appendix A Wildlife legislation and planning policy

The following is a summary of wildlife legislation and planning policy which affords protection to plants and animals and seeks to conserve, enhance and restore biodiversity:

Conservation of Habitats and Species Regulations 2010

The Conservation of Habitats and Species Regulations 2010 (SI No. 2010/490) update and supersede The Conservation Regulations 1994 (as amended). The 2010 Regulations are the principal means by which the European Habitats Directive is transposed in England and Wales.

The Regulations provide for the designation and protection of a network of 'European Sites' termed Natura 2000, the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.

The Conservation of Habitats and Species Regulations 2010 apply in the terrestrial environment and in territorial waters out to 12 nautical miles. The EU Habitats and Wild Birds Directives are transposed in UK offshore waters by separate regulations – The Offshore Marine Conservation (Natural Habitats andc.) Regulations 2007 (as amended).

Regulation 41 relates to the protection of European protected species listed under Schedule 2 of the Regulations. Taken together it is an offence to undertake the following acts with regard to European Protected Species:

- deliberately capture, injure or kill any wild animal of a European Protected Species;
- deliberately disturb animals of any such species in such a way as to be likely to:
  - impair their ability to survive, breed, rear or nurture their young, hibernate or migrate, or
  - affect significantly the local distribution or abundance of the species to which they belong;
- deliberately take or destroy the eggs of such an animal; or
- damage or destroy a breeding site or resting place of such an animal.

The disturbance offence is generally taken to refer to a discernable effect at population level and biogeographic level, rather than simply to an individual animal. However, in certain circumstances the disturbance of one individual animal may have population level effects.

The Regulations also make it an offence (subject to exceptions) to deliberately pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 5.

However, the actions listed above can be made lawful through the granting of licences (European Protected Species Licence) by the appropriate authorities (Natural England in England). Licences may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority has determined that the following regulations are satisfied:

- the works under the licence are being carried out for the purposes of ‘preserving public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment’;
- there is ‘no satisfactory alternative’; and
- the action 'will not be detrimental to the maintenance of the population of the species concerned at favourable conservation status in their natural range'.

To apply for a licence, the following information is required:

- the species concerned;
- the size of the population at the site (note this may require a survey to be carried out at a particular time of the year);
- the impact(s) (if any) that the development is likely to have upon the populations; and
- what measures can be conducted to mitigate for the impact(s).

The Wildlife and Countryside Act 1981

The Wildlife and Countryside Act 1981 (as amended) is the principal piece of UK legislation relating to the protection of wildlife. It consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive) in Great Britain.

The Act makes it an offence (with exception to species listed in Schedule 2) to intentionally kill, injure, or take any wild bird or their eggs or nests. Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Special Protection Areas (subject to exceptions) to provide further protection to birds. The Act also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity.

The Act makes it an offence (subject to exceptions) to intentionally kill, injure, or take, possess, or trade in any wild animal listed in Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. The Act also prohibits certain methods of killing, injuring, or taking wild animals listed in Schedule 6.

The Act makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of such plants.

The Act contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9. It also provides a mechanism making any of the above offences legal through the granting of licences by the appropriate authorities.

The Countryside and Rights of Way Act 2000

The Countryside and Rights of Way Act 2000 (CRoW) was passed to provide additional levels of protection for wildlife whilst also strengthening the protection afforded to Sites of Special Scientific Interest.

Schedule 12 of the Act amends the Wildlife and Countryside Act 1981, strengthening the legal protection for threatened species. The provisions make certain offences 'arrestable', create a new offence of ‘reckless’ disturbance, confer greater powers to police and wildlife inspectors for entering premises and obtaining wildlife tissue samples for DNA analysis, and enable heavier penalties on conviction of wildlife offences.

Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities Act 2006 (NERC) is designed to help achieve a rich and diverse natural environment and thriving rural communities through modernised and simplified arrangements for delivering Government policy.

It was created to make provision in connection with wildlife, Sites of Special Scientific Interest, National Parks and the Broads; to amend the law relating to rights of way; to make provision as to the Inland Waterways

Amenity Advisory Council; to provide for flexible administrative arrangements in connection with functions relating to the environment and rural affairs and certain other functions; and for connected purposes.

Section 40 of NERC carries an extension of the earlier CRoW Act biodiversity duty to public bodies and statutory undertakers to ensure due regard to the conservation of biodiversity. Section 41 requires the Secretary of State, as respects England, to publish a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity. The updated S41 list, published in August 2010, identified 56 habitats and 943 species of principal importance.

The Protection of Badgers Act 1992

In the UK badgers are primarily afforded protection under the Protection of Badgers Act 1992. This makes it illegal to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so and to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it.

Badgers also receive limited protection under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended). This outlaws certain methods of taking or killing animals.

Under Section 10 (1)(d) of the Protection of Badgers Act 1992, a licence may be granted by Natural England to interfere with a badger sett for the purpose of development, as defined by Section 55(1) of the Town and Country Planning Act 1990.

Section 3 of the Protection of Badgers Act 1992 defines interference as:

- damaging a badger sett;
- destroying a badger sett;
- obstructing access to, or any entrance of, a badger sett;
- causing a dog to enter a sett; or
- disturbing a badger when it is occupying a badger sett.

Natural England guidance has suggested that the following operations may disturb badgers in their setts, and therefore unless these can be avoided a licence may be required for:

- excavation within 20m of any entrance to an active sett;
- excavation or other ground disturbance using heavy machinery within 30m of a sett;
- fire or chemicals within 20m of a sett;
- tree felling in the area of a sett – trees should be felled away from setts and cleared away from badger paths; and
- other disturbances such as loud noises or vibrations; some activities such as pile driving and the use of explosives that may result in a disturbance over a much greater distance will require individual consideration.

The Wild Mammals (Protection) Act 1996

The Wild Mammals (Protection) Act 1996 makes it an offence for any person to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

The Animal Welfare Act 2006

Prior to the Animal Welfare Act 2006, people only had a duty to ensure that an animal didn't suffer unnecessarily. The new Act keeps this duty but also imposes a broader duty of care on anyone responsible for an animal to take reasonable steps to ensure that the animal's needs are met. This means that a person has to look after the animal's welfare as well as ensure that it does not suffer. The Act says that an animal's welfare needs include:

- a suitable environment (how it is housed);
- a suitable diet (what it eats and drinks);
- the ability to exhibit normal behaviour patterns;
- any need it has to be housed with, or apart from, other animals; and
- protection from pain, suffering, injury and disease.

With regards to development, this may have implications when translocations of animals are proposed. As such, care must be taken to ensure that any receptor sites are suitable for the species in terms of habitat and carrying capacity.

The Hedgerows Regulations 1997

The Hedgerows Regulations 1997 were introduced to protect hedgerows of importance from destruction. However, the legislation does not apply to any hedgerow which is within or marking the boundary of the curtilage of a dwelling house.

For the Regulations to be applicable, the hedgerow must be at least 20m in length or, if less than 20m, it must meet another hedgerow at each end. A hedgerow is deemed to be important if it is more than thirty years old and meets at least one of the criteria listed in Part II of Schedule 1 of the Regulations.

If a hedgerow which qualifies under the Regulations is to be removed, the landowner must contact the local planning authority in writing by submitting a hedgerow removal notice. The local planning authority then has a period of 42 days to decide whether or not the hedgerow meets the importance criteria of the regulations.

Biodiversity Action Plans

Biodiversity Action Plans (BAPs) set out actions for the conservation and enhancement of biological diversity at various spatial scales. They consist of both Habitat Action Plans (HAPs) and Species Action Plans (SAPs).

The UK BAP was the UK's response to the 1992 Convention on Biological Diversity in Rio de Janeiro. Following a review in 2007 a list of 1150 priority species and 65 priority habitats has been adopted, which are given a statutory basis for planning consideration under Section 40 of the NERC Act 2006.

Red Data Books

British Red Data Books (RDB) are an additional method for classifying the rarity of species, and are often seen as a natural progression from Biodiversity Action Plans.

RDB species have no automatic legal protection (unless they are protected under any of the legislation previously mentioned). Instead they provide a means of assessing rarity and highlight areas where resources may be targeted. Various categories of RDB species are recorded based on the IUCN criteria and the UK national criteria based on presence within certain numbers of 10x10km grid-squares (http://www.jncc.gov.uk/page-3425). As with Biodiversity Action Plans, where possible, steps should be taken to conserve RDB species which are to be affected by development.

Harcombe **E**nvironmental **S**ervices

Ecology, Flood risk, Drainage, Contaminated land, Sewage treatment, Odour

PROPOSED MATERIALS REPROCESSING FACILITY

SPRINGWAY LANE BUSINESS PARK, WESTONZOYLAND

SITE FLOOD RISK ASSESSMENT

SITE FLOOD RISK ASSESSMENT (FRA)

OF: PROPOSED MATERIALS REPROCESSING FACILITY, SPRINGWAY LANE BUSINESS PARK, WESTONZOYLAND, SOM

FOR: MR G CARRINGTON (CLIENT), REBECCA BOMERS (ENV'T MANAGER)

PROJECT: 1709-01 WESTONZOYLAND TOWENS

REVISION:

	COPY FOR SUBMISSION TO PLANNING	01/10/2017
A	REVISION OF PROPOSAL, ACCESS AND DRAINAGE	05/10/2017
B	REVISED PROPOSAL, DRAINAGE	31/10/2017
C	REVISED PROPOSAL AND DESCRIPTIONS	14/05/2018
D	MINOR EDITS, CORRESPONDENCE FROM OL	16/05/2018
E	MINOR EDITS, FURTHER TO MEETING WITH RB	25/05/2018

PREPARED BY:

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JOHN HARCOMBE BSc (Hons), MSci,

HARCOMBE ENVIRONMENTAL SERVICES LTD

DATE: 25 / 05 / 2018

Credentials of Harcombe Environmental Services Ltd and John Harcombe

Harcombe Environmental Services (HES) Ltd is responsible for all that is contained within this report. HES Ltd is owned and Directed by John Harcombe, the Principle Scientist and Design Engineer. The company was incorporated in April 2013, no. 8486597, the trading office is Stogursey, Somerset.

Harcombe Environmental Services is a competent environmental consultancy and holds current Employers and Public Liability, Professional Indemnity and Legal Cover, with Royal Sun Alliance (£1M) and DAS Ltd (£100K).

John Harcombe's credentials are as follows:

- Member of Institution of Environmental Sciences (MIEnvSci) (pending).
- Master of Science Degree in Water and Environmental Management, Bournemouth University.
- Bachelor of Science (Hons) Degree in Applied Biology, maj. Environmental Biology, Coventry University.

John Harcombe's experience is as follows:

- 2013 to Present — Director, Harcombe Environmental Services Ltd.
- 2010 to 2013 — Principal Environmental Scientist, Harcombe Environmental Services.
- 2009 to 2010 — Development and Flood Risk Officer, Environment Agency.
- 2003 to 2009 — Senior Environmental Scientist, Wessex Water Services.
- 1999 to 2003 — Process Commissioning Engineer, Wessex Water Services.
- 1998 to 1999 — Scientific/Engineering roles during work and travel in Pacific and Australasia
- 1994 to 1998 — Research Scientist (Biology/Engineering), Yorkshire Water Services.

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1 INTRODUCTION

1.1 Background - Commission.

This Flood Risk Assessment (FRA) report has been prepared by Harcombe Environmental Services (HES) Ltd on behalf of the owners and applicants, Towens of Weston Ltd, at the request of Graham Carrington, in support of a planning application to Somerset County Council (SCC) for the proposed development of a Materials Reprocessing Facility on a plot of Brownfield land on land off Springway Lane Business Park, Westonzoyland. HES Ltd are commissioned to write this FRA, to support the planning application to SDC. Data was originally provided by Dave Sainsbury, but the contract has since been recently managed by Rebecca Bomers, the Environmental Manager for Towens of Weston Ltd, with the assistance of external consultants Oliver Laidler of Land and Mineral Management.

1.2 Background – Planning and FRA.

The site, located off Springway Lane Business Park to the eastern side of Westonzoyland, is a plot of redundant Brownfield land once used as a historical airfield, then as an informal quad bike track, later (as shown on mapping) used as a paving slab manufacturing site to store wooden pallets. Towens of Weston Ltd have recently acquired the site and have since been clearing the site of inert materials to assess the condition of the surfacing. The majority of the development plot is surfaced with concrete, with small areas of asphalt.

This FRA report includes the details of the Site Specific Flood Risk Assessment and has been completed in accordance with the guidance set out in the National Planning Policy Framework (NPPF), the relevant policies of Sedgemoor District Council and the Environment Agency (EA) and the British Standard 8533:2011. The Sequential Approach has been adopted where practicable and all relevant officers in the Local Planning Authority and statutory consultees consulted, where appropriate. The Sequential and Exception Tests have been completed to best practice, further details are included in Section 4 of the FRA report.

1.3 Aims of the Report.

This report aims to satisfy the concerns of the EA Flood Risk Team, with respect to addressing the requirements of NPPF, through:

- Assessing the actual flood risk to the development site and whether the proposed development of a Materials Reprocessing Facility is appropriate in the location;
- Assessing whether the development will result in a change in the flood risk to the surrounding area and have any impact on the existing land drainage of the site;
- Assessment of the safety of the current and future users of the site and the need for any site changes or mitigation measures.

1.4 Development Proposal and Need.

The development proposal is for the following items:

- Full application for Materials Reprocessing Facility for recycling materials including aggregates, road plainings, chipping of wood, shredding of green waste and soil screening;
- Construction of a steel-framed, open, operational building, for temporary storage of 'dry' materials (Sorting Shed) and covering some of the existing operational bays;
- Installation of surfacewater drainage systems, associated with the operational ground and roof area and the processing area, respectively; the concept design of the drainage will be included in this report.

The development is required to allow efficient work duties of the proposed Towens of Weston recycling operation, at Springway Lane Business Park. The site has been acquired by Towens of Weston Ltd and work has been undertaken to clear the stockpiled wood and other material on the site, to allow the assessment of the condition of the ground surfacing. The site was previously accessed from the west, through Springway Farm and directly off Springway Lane. The area is surfaced mainly with concrete (from the historical airfield) and has some temporary storage bays, divided by large-block walls. The proposed operational building is required allow handling and storage of dry materials during wet periods, allowing the effective and safe storage of those materials that are affected by adverse weather conditions.

2 SITE DESCRIPTION

2.1 Location and Access.

The development site is located on a plot of land adjacent to the existing material storage area on land to the west of Springway Lane Business Park and east of Springway Farm, 0.9km east of Westonzoyland. The site is located on an area of redundant historical airfield, recently used as an informal quad bike track and currently used to temporarily store raw materials (soil, stone and wood). The development area is mostly surfaced with concrete, with small areas of asphalt, compacted stone and even small areas of rank grass and weeds. The site is currently accessed by heavy good vehicles from the shared access past Springway Farm (to the west) and can be accessed by pedestrians and smaller vehicles from the access to Springway Lane Business Park (to the northeast.

The proposed development site will have 1no. primary access, with 2no. secondary (emergency only) access. The primary access will be located to the northeast of the site on an extended and improved existing track, with a new access splay on to the A372. The 2no. secondary accesses are the existing farm track, to the west and the pedestrian and small vehicle access to Springway Lane, to the east, respectively. The site is centred at Ordnance Survey grid reference ST 36215 34025, with the primary access off the A372 at grid reference ST 36110 34439 and secondary access at grid reference ST 36135 34106 and ST 36337 34056. The location of the site between Westonzoyland and Middlezoy is shown in Figure 2.1, the arrangement of the site boundary and access to the site is shown in Figure 2.2. Photographs of the existing site, taken during the recent site survey, are shown in the Appendix.

Figure 2.1 Location of Development Site and Westonzoyland

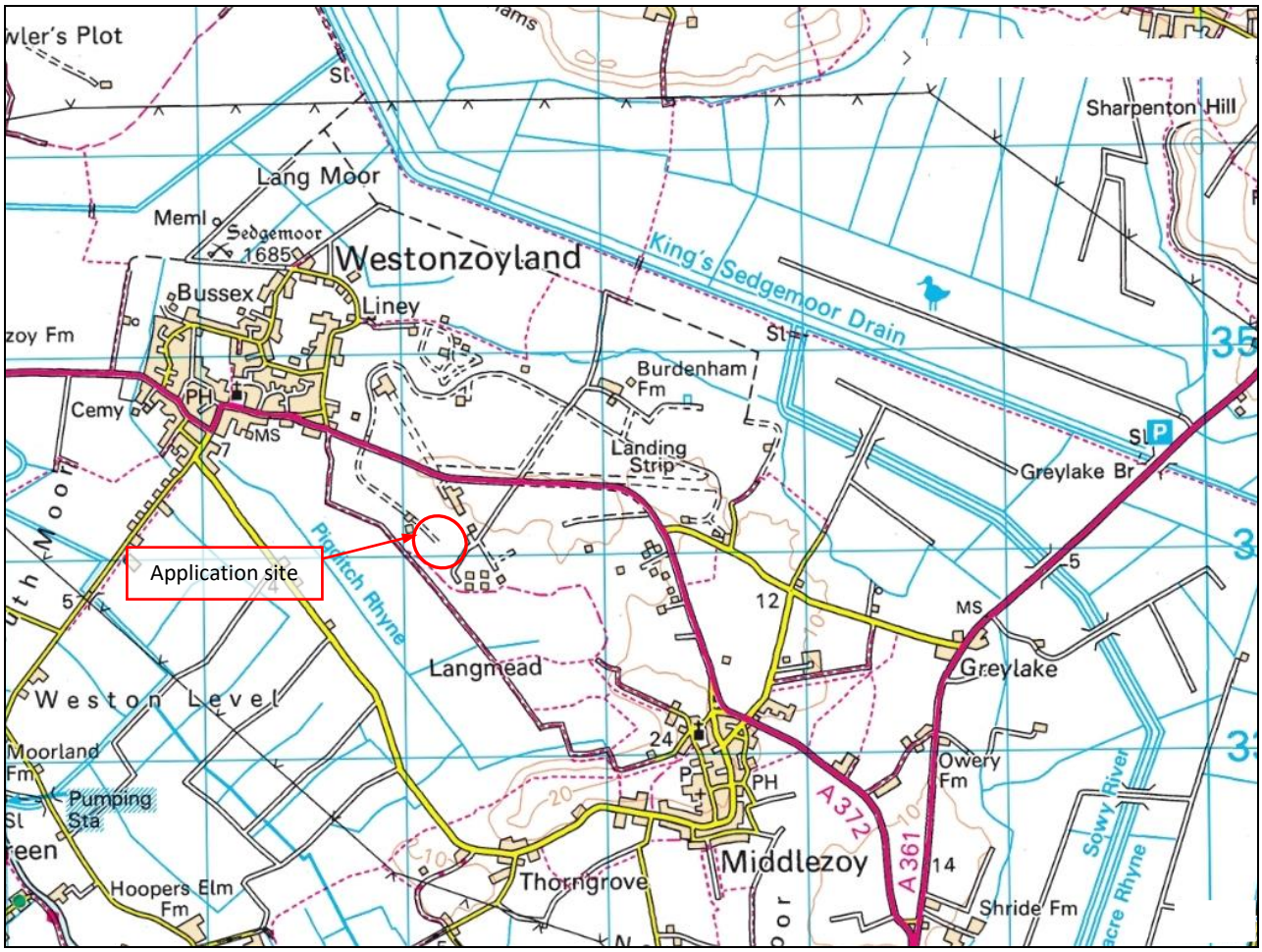
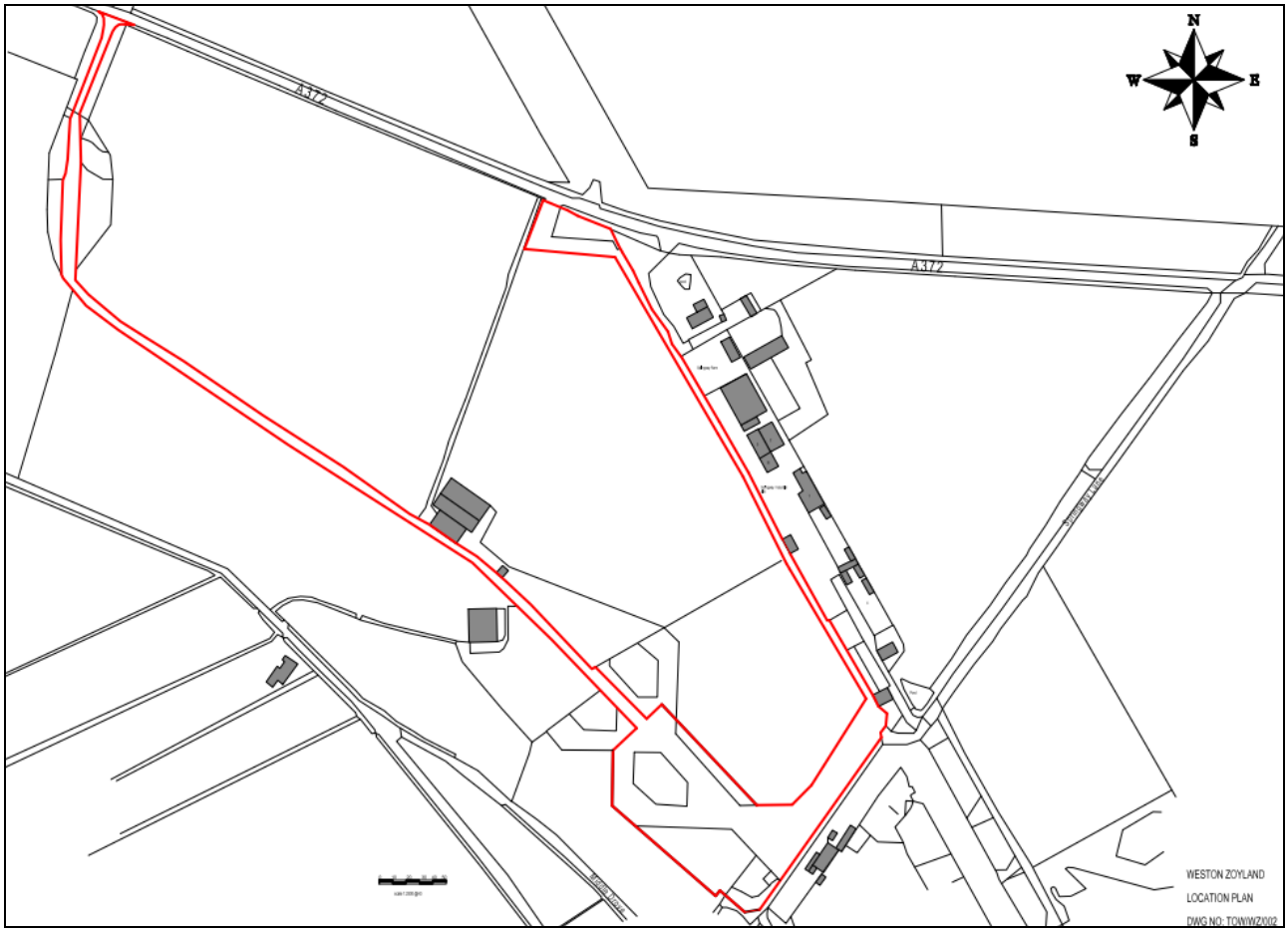


Figure 2.2 Arrangement of Development Site and Access, to south of A372



2.2 Existing Site Use

The area of land outlined in red in Figure 2.2 represents the perimeter of land owned by Towens of Weston Ltd, the extent of the proposed development plot and the access routes off the highway (A372). The area of the development site was previously used as an RAF airfield and more recently as an informal quad bike track, then for concrete slab production. The quad bike track is shown in aerial photographs of the site and so is considered to be in use up to about 2010-14, the slab production use is shown on mapping of the area, date unknown. The site has been partially cleared and accessed by Towens of Weston Ltd and a new accessed has been arranged, to the north of the site.

The development plot is mostly surfaced with concrete, with small areas of asphalt and compacted hardcore and some smaller areas of grass and weeds. The site was used as an RAF airfield between 1926 and 1947, then again from 1952 to 1958, after which the airfield was abandoned. Areas of airfield to the north of the A372 are still used as a private airstrip for light aircraft. The area of the development site was never fully decommissioned and the original concrete surfacing from that period remains over much of the ground. In some areas the concrete surfacing has been patched or capped with concrete and/or asphalt, to repair damage or voids in the surfacing. There is a small area to the south of the plot which is surfaced with compacted hardcore and small areas of weeds and grass exist within the areas of impermeable surfacing. The site is bordered by undeveloped areas to the north, west and south including cattle pasture and cropped arable land. The site is bordered to the east by developed land of Springway lane Business Park.

2.3 Topography and Drainage of the Site

The development area lies within a level area of land to the east of Westonzoyland, on the site of the old airfield. The area is relatively flat and approximately 6-7 metres above sea level, with only a few notable low-lying features. The site slopes slightly from north down to south.

A topographical survey of the site was completed by Dave Sainsbury, in August 2017 with spot levels taken at key points adjacent to the development area, such as the highway and access. The existing site levels are measured in metres Above Ordinance Datum (mAOD), a copy of the topographical plan can be provided on request. The existing ground levels on the site, considered to be of importance to this report, are shown below:

- Access road from Springway Lane Business Park: 7.43m - 7.67m;
- Secondary access from Springway Lane Business Park: 7.41m - 7.45m;
- Existing working area (north to south): 7.42m - 7.02m - 6.46m;
- Concrete surfacing in centre of site: 6.45m - 6.67m;
- Primary access to Springway Farm access: 6. 83m;
- Footprint of proposed building: 6.28m - 6.49m.

A landform and hydrology survey was carried out by John Harcombe of HES Ltd in September 2017, to confirm the site layout, drainage and hydrological features of the site and surrounding area. There is little or no formal surfacewater drainage of the development site or other adjacent areas of the historic airfield. There may have been a surfacewater drainage system linked to the operational airfield, but no evidence of its arrangement was recorded during the survey. Excess surfacewater from the hard surfacing of the airfield currently runs off the site to the adjacent ground, the northern end of the site is approximately 0.8m - 1.0m higher than the southern side of the site and surfacewater generally runs to the south. The fields surrounding the airfield (to the south and west) are drained by a network of drainage rhynes, managed mainly by local landowners and also (partly) by the Somerset Highways Department and the Somerset Drainage Boards Consortium.

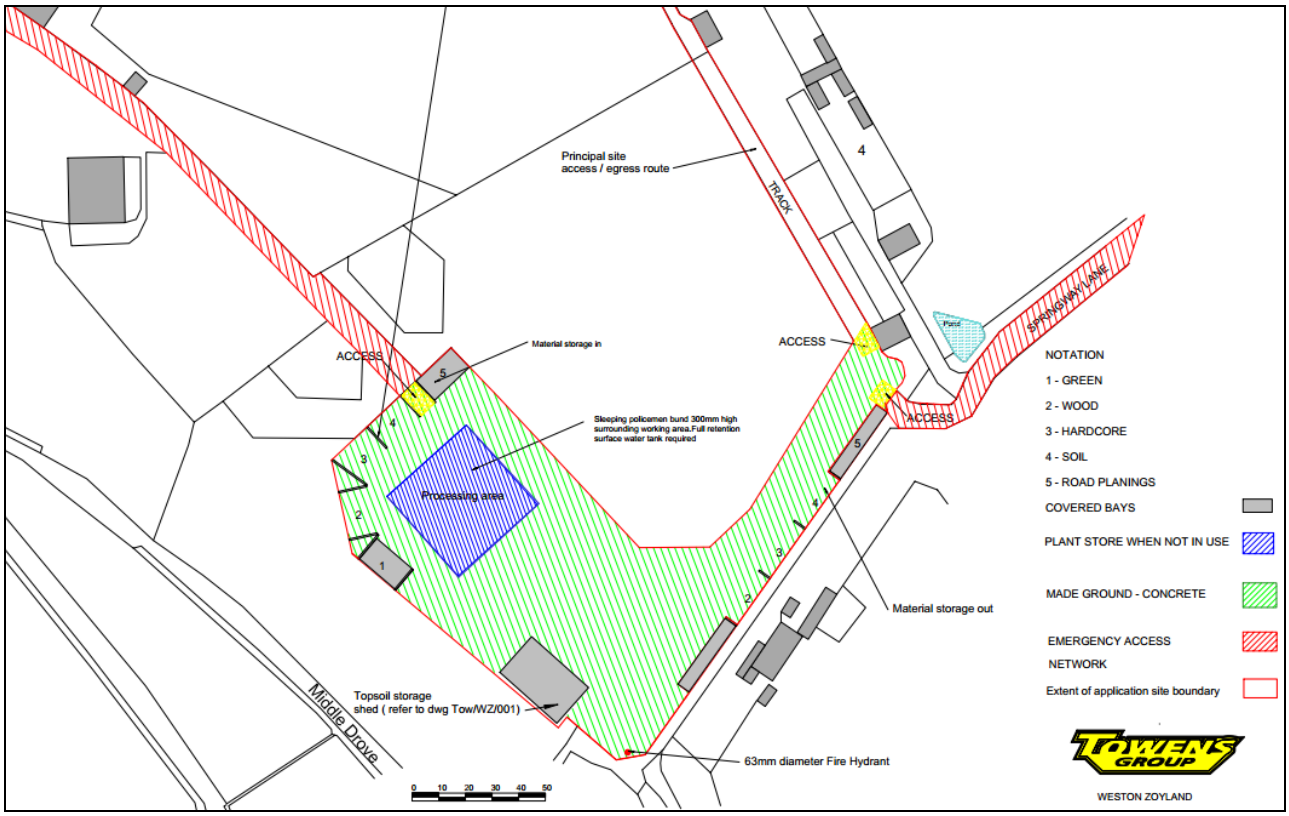
The majority of the development site is surfaced with concrete, with small areas of asphalt and compacted hardcore and smaller areas of mainly weeds, more details of surfacing is shown in Section 2.5. Excess surfacewater from the development area is considered to currently run off to the south towards the Langmead area, which drains via Pigditch Rhyne, which drains to the greater land drainage network to the west. This land drainage network generally drains to the north, via Andersea Main Rhyne and Chedzoy New Cut, discharging into King's Sedgemoor Drain, which discharges into the River Parrett by sluice at Dunball. The discharge of the King's Sedgemoor Drain into the River Parrett is controlled by tidal sluice, constructed in by the EA in 1984. The management of the field drains are the responsibility of the local land owners, the larger watercourses are managed by the Parrett Department of the Somerset Drainage Boards Consortium.

2.4 Layout of the Proposed Development

The proposed development will include the creation of a Material Re-processing Facility, including the construction of sorting bays (some covered) and an open building (a Sorting Shed). The development also includes the installation of surfacewater drainage systems associated with the operational area and building and the Processing Area, respectively.

The existing concrete surfaces will be retained and extended slightly (by approximately 3%) to include access to the Sorting Shed. The layout of the proposed development site is shown in Figure 2.3, the relative surface areas of the existing and proposed sites is shown in Table 2.1.

Figure 2.3 Layout of the Proposed Development Site



2.5 Permeability of the Ground and Surface Water Runoff

The geology of the site, as shown by the British Geological Survey 'Geology of Britain viewer', is made up of a bedrock of Mercier Mudstone Group (Mudstone and Halite-stone) (sedimentary bedrock formed approximately 201 - 252 million years ago). There is a layer of Burtle Formation superficial deposits of sand and gravel. This would suggest that the subsurface layers of the ground have the potential of having a relatively low permeability or soil porosity, where the soil is clay rich, however, the site has the potential to have a moderate-good permeability where the subsurface layers are sand or gravel-rich. Detailed soil permeability tests have been carried out by HES Ltd at another development site approximately 0.5km to the north of the proposed development site, where a surfacewater soakaway was installed, these investigations highlighted the presence of sand-gravel layers of a Burtle Formation. During soil porosity tests the water table was measured to be at least 2.0m below the surface with a relatively good porosity. The soil conditions are considered likely to be similar, in areas of the development site, as seen further to the north.

The surface permeability of the majority of the development area is considered to be poor, due to the existing concrete surfacing. Approximately 90% of the existing site is surfaced with concrete or asphalt and is considered to have a poor potential soil permeability and a resistance to the impact groundwater. The ground outside that surfaced with concrete is considered likely to have a moderate-good permeability, due the lack of disturbance from development and historic land-use by agriculture.

It is proposed to improve the formal drainage of the site, by installing a drainage systems to capture surfacewater from the building roofs and operational areas; runoff captured from the Processing Area will be contained and treated differently to the general surfacewater. The estimated areas and surface permeability of the different surfaces of the existing and proposed arrangement is outlined in Table 2.1. The detailed specification of materials used, surface areas and soil permeability of the site will be confirmed at the detailed design stage, in a separate document, the Drainage Strategy, normally submitted at the Discharge of Conditions stage. The design of the drainage system will be discussed in greater detail in Section 5, the concept of the drainage systems described as follows:

- Excess surfacewater runoff will be collected from the whole operational site;
- Surfacewater runoff will drain off the operational area to the southeast and be collected by an open channel drain, on the southern site perimeter;
- Runoff from the new building (Sorting Shed) will be collected by guttering and transferred directly to a sub-surface soakaway;
- The open channel drain will be fitted with check dams to allow the channel to be isolated from the discharge point, if required;
- The terminal end of the channel will be open and lined with concrete, to allow effective management, fitted with a gully which will discharge the water to the soakaway;
- A large combined sub-surface soakaway will be constructed to the southeast corner of the operational site, taking runoff from the operational site and Sorting Shed building;
- The central Processing Area will be surrounded by low bunds (in the form of 'sleeping policeman') to allow collection of the 'Dirty' surfacewater (wastewater runoff), this wastewater will be directed to sub-surface pipework discharging to a separate sub-surface collection tank, which will be emptied periodically, and treated accordingly.

Table 2.1 Surface Areas and Permeability of the Site

Surface	Detail	Existing m^2	Proposed m^2	Impermeability %	Impermeable area Existing	Impermeable area Proposed
Hard standing	Concrete	9590	10001	80%	7672	8001
Hard standing	Asphalt	2740	2603	75%	2055	1952
Improved surfaces	Compacted stone	959	137	45%	432	62
Building roof	Sheeting	0	685	90%	0	617
Rough areas	Grass / weeds	411	274	15%	62	41
Totals		**13700**	**13700**		**10220**	**10672**

NB. The estimated area of impermeable surfaces will increase slightly on the developed site, from 1.02Ha to 1.07Ha, an increase in impermeable area of approximately 4.4%.

2.6 Flood Risk Vulnerability Classification

On consideration of the flood risk vulnerability classification, as outlined in Table 2 of the Technical Guidance to the NPPF and Sedgemoor District Council Strategic FRA, the use of the existing site is considered to be of 'land and buildings of business use'. The existing site use is considered to come under a flood risk designation of 'Less Vulnerable'. The proposed (developed) site use is considered to also come under the designation of ‘Less Vulnerable’.

3 IDENTIFICATION OF FLOOD RISK

3.1 Sources of Information

The following Agencies, Local Authorities, information sources were consulted during the development of the design of the proposed scheme and in preparation of this Flood Risk Assessment report. The results of the local consultations are as follows:

- **Environment Agency**. Data relating to the flood risk designation and mapping of the site and surrounding area was gained from the Environment Agency published data sets, listed in the website Data.Gov.uk. The data gained from these searches are represented in maps shown in the report.
- **Local Planning Authority (Sedgemoor District Council)**. The 2014 Core Strategy, 2015 Strategic Flood Risk Assessment (Level 1 Report), 2010 Parrett Estuary Flood Risk Management Strategy and the 2017 Bridgwater Tidal Barrier - Residual Flood Risk Assessment were consulted to determine the flood risk issues and classification of the area. These documents provided information on historic fluvial and tidal flooding and surface water and sewer flooding events.
- **Local Planning Authority (Somerset County Council)**. Nicola Dawson of the Civil Contingencies Unit (Somerset) was consulted in details regarding the Flood Warning and Evacuation plans for the site. The results of this are discussed later.
- **Wessex Water PLC**. The Development Team was consulted regarding the existing connections of the site to the sewerage system near the site.
- **Somerset Drainage Boards Consortium**. The Area Engineer for the Somerset DBC, was consulted in 2016 regarding the existing land drainage of the area and the potential surfacewater drainage of the site.
- **Planning Agent/Client**. Dave Sainsbury is acting as Planning Agent for Towens Ltd and has provided the information relating to the proposal, need and agreed the concept of the drainage proposal. Consultant Oliver Laidler, of Land and Mineral management provided further details on the revised development.
- **Site Investigation**. A topographical survey was undertaken by a Dave Sainsbury, of Towens Ltd and the existing levels on and adjacent to the development site shown on a plan. The site was also surveyed by John Harcombe (HES Ltd) in September 2017. These surveys confirmed the arrangement of formal drainage, features and hydrology of the site and the local drainage rhynes and flood evacuation routes from the site. A further site visit was conducted with Rebecca Bomers, to confirm operational management.

3.2 Flooding from Rivers (Fluvial) and Sea (Tidal)

The information sources from the EA, SDC, SCC, SDBC and local knowledge were used determine the likely risk to the site from fluvial or tidal sources.

3.2.1 Flood Zone Mapping.

The EA flood risk mapping classifies the southern half (approximately 60% of the site) of the planning application area and the majority of the land to the south of the site as being within an area of Flood Zone 3, assessed as having a 0.5% (1 in 200) or greater chance of being

flooded each year, also referred to as the Annual Exceedance Probability (AEP). The northern half of the site is classified as being within areas of Flood Zone 2 (approximately 5%) and Flood Zone 1 (approximately 35%), assessed as having AEPs of up to and less than 0.1% (respectively). The EA Flood Zone mapping of the area is shown in Figure 3.1. This EA flood map shows the unprotected flood scenario, that is the flood mapping without the protection of any of existing flood defence structures.

The formal flood risk classification for the site, where the flood defences are not taken into account, is considered to be a Tidal flood risk. However, the site is protected successfully by flood defence structures, on the Bristol Channel coast and along the banks of the River Parrett and to a lesser extent King's Sedgemoor Drain, managed by the Operations Departments of the EA and Somerset Drainage Boards Consortium (respectively). If the Tidal defences were to be taken into account the risk from tidal flooding is considered to be less than represented in the flood mapping, and Fluvial flooding would be likely to the main flood risk to the site.

The Sedgemoor Level 1 SFRA Report Figure 2A shows flood risk mapping that goes into further detail, differentiating between Flood Zones 3a and 3b. The SFRA Figure 2 shows the site is a mixture of Flood Zones 1, 2 and 3a. There is an area of Flood Zone 3b approximately 0.8km north of the development area, but this has no significant impact on the site. The SFRA Figure 2A flood risk mapping is shown in Figure 3.2.

The overall flood risk to the area from rivers and sea is shown in the EA mapping represented in Figure 3.3. This mapping takes into account the potential benefit of the flood defences and the impact of the tidal and fluvial flood plains. Figure 3.3 shows that the development site benefits from a degree of protection from the defences on the Main Rivers and that the site is classed as being 'Very low' or no risk.

Figure 3.1 EA Flood Map For Planning (Rivers and Sea) Flood Zone 3

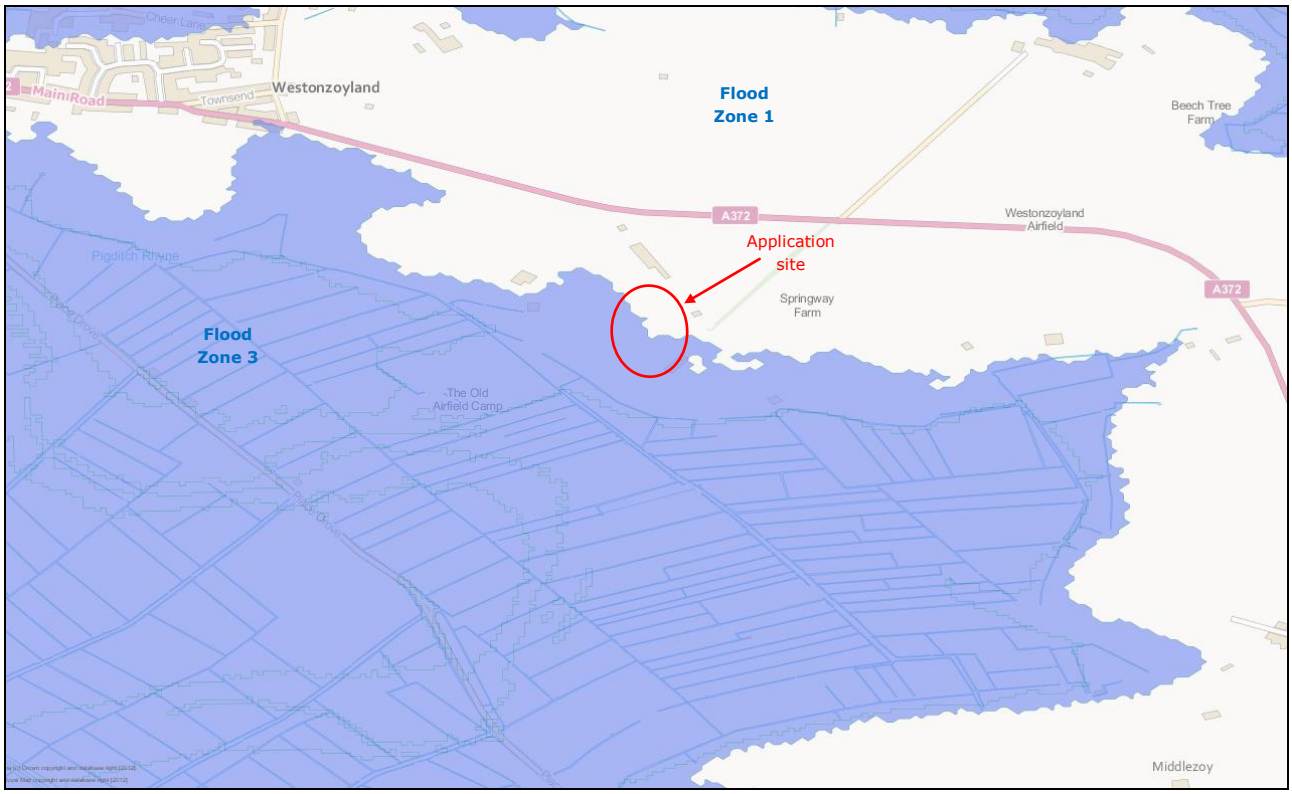


Figure 3.2 Sedgemoor SFRA Level 1 Figure 2A - Flood Zones

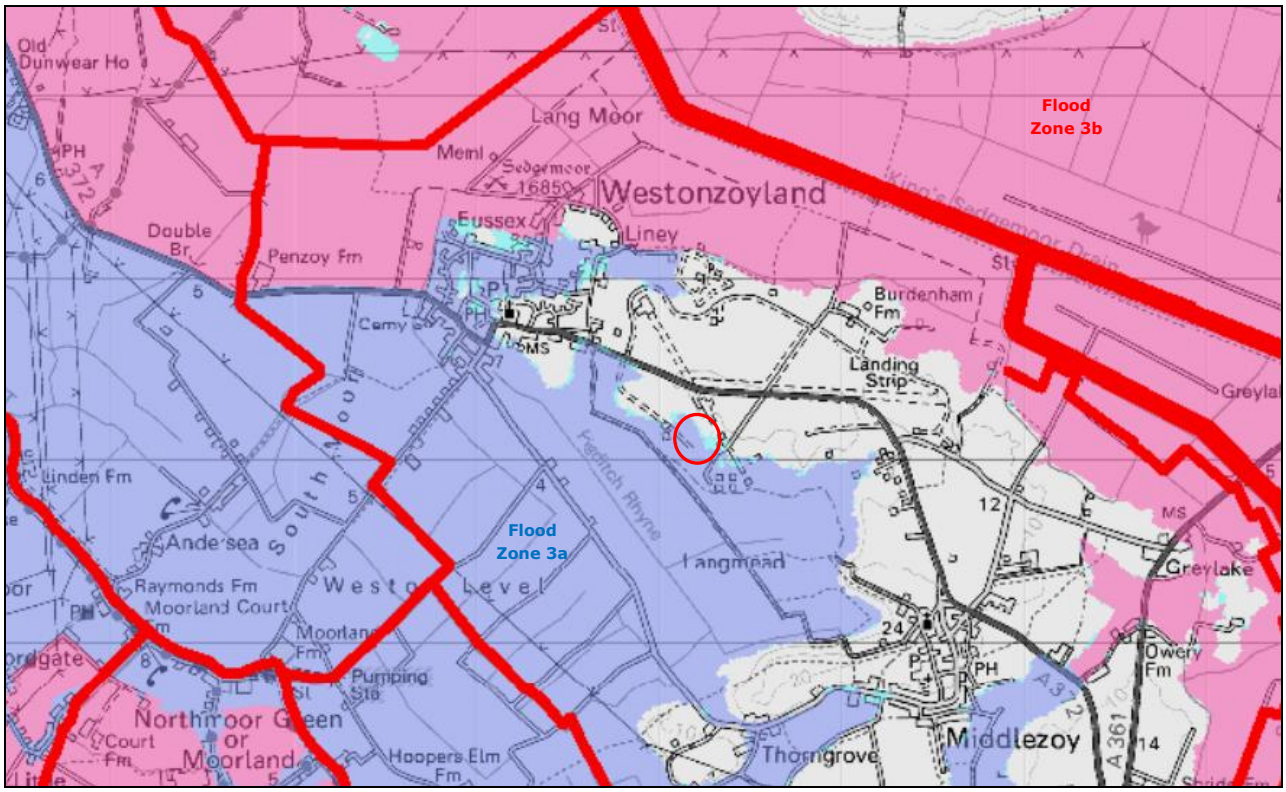
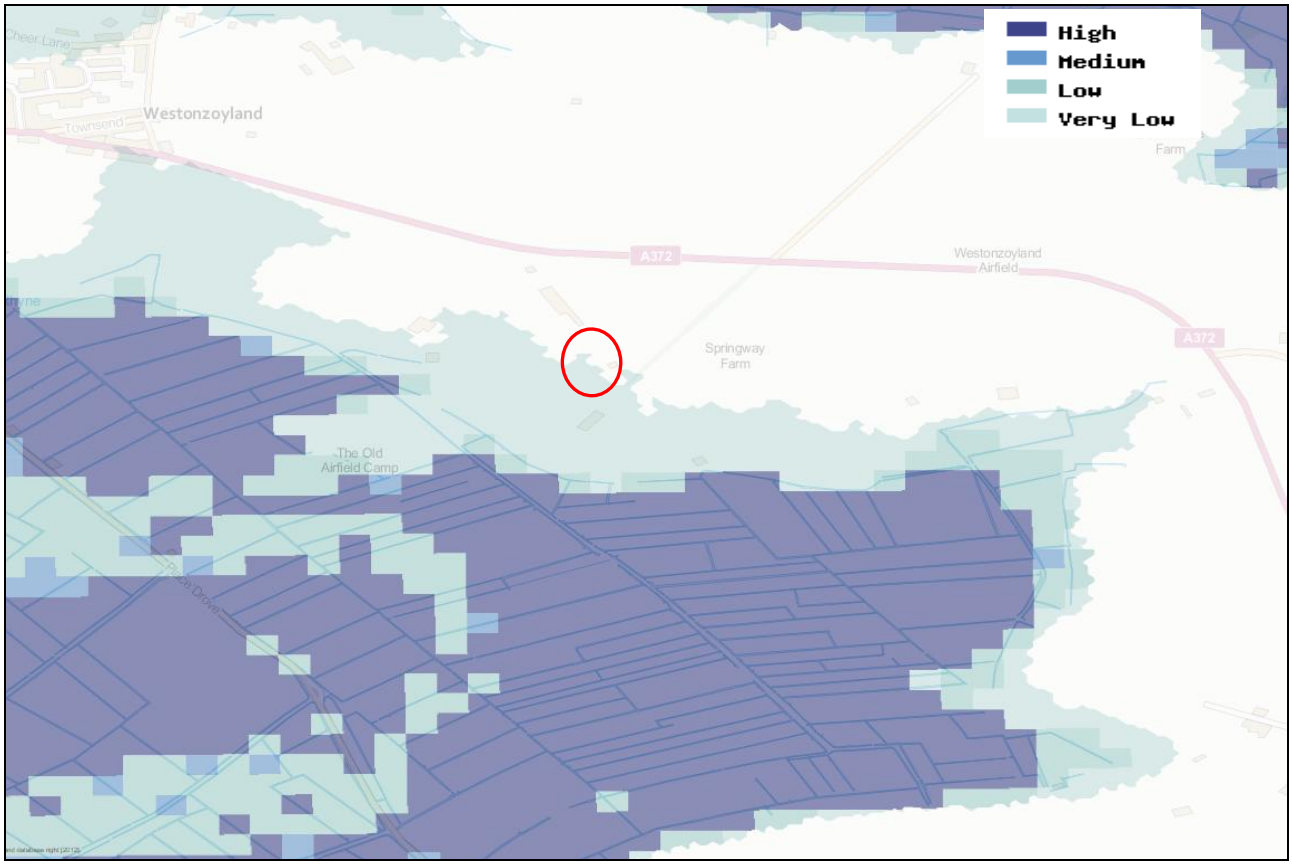


Figure 3.3 EA Model - Risk of Flooding from Rivers and Sea

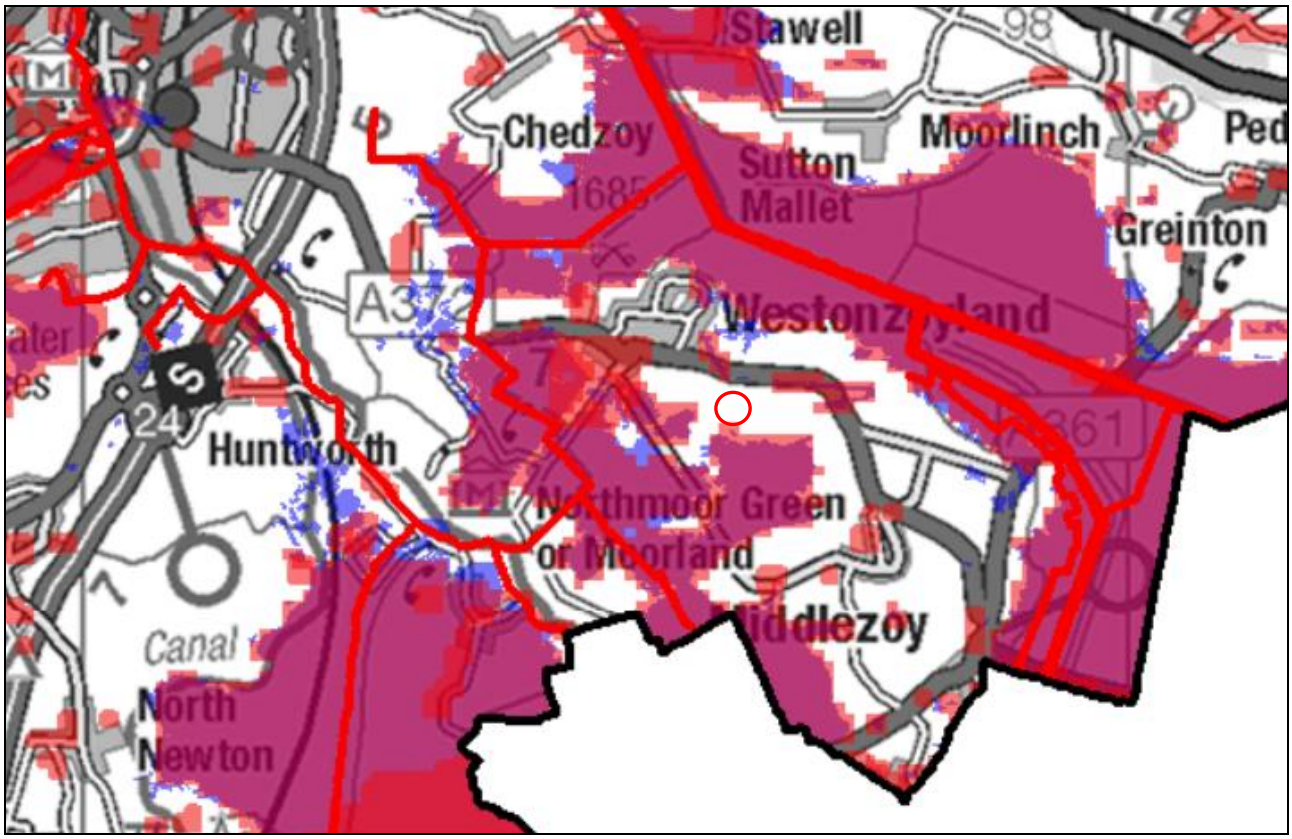


3.2.2 Historic Events.

There is no recorded evidence of historic flood events affecting the development site. The mapping of EA data and Somerset County Council historic flood outlines is shown in Figure 3.4. This mapping of the flood outlines shows that although flooding has occurred relatively close to the southern side of the site, it is considered that the site has not experienced flooding.

It is not recorded whether the site was significantly impacted by the historic tidal flood event that occurred in the region in 1981, which caused widespread flooding across Sedgemoor. During that event recorded tide height at Bridgwater was 7.95m, this is likely to have had an impact at Dunball and the River Parrett. However, it is thought that this site was not affected.

Figure 3.4 EA Historic Flood Map

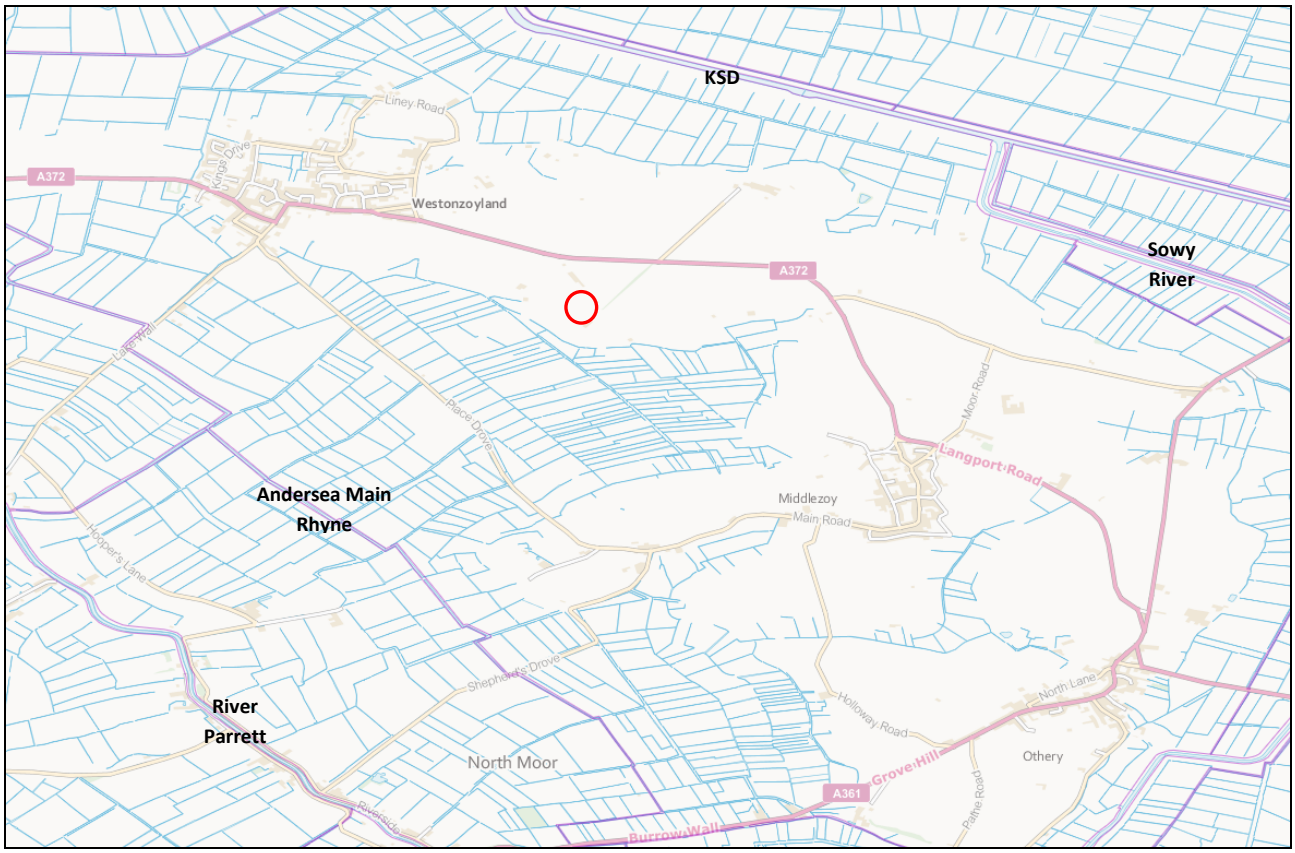


3.2.3 Flood Defences.

The site is protected by formal tidal flood defence structures (mainly earth embankments). There are tidal flood defence structures on the Bristol Channel coast (west of the site), along banks of the River Parrett (to the south) and to a lesser extent along the banks of the King's Sedgemoor Drain (KSD) (to the north), the Sowy River (to the east) and Andersea Main Rhyne (to the south). The Sowy River and Andersea Rhyne drain to the KSD, which discharges to the tidal River Parrett at Dunball wharf. The discharge of the KSD to the Parrett is controlled by a tidal sluice constructed by the EA in the 1980's, after the historic flooding of the area. These flood defence structures are monitored and maintained, where necessary, by the EA Operations Team, Somerset Drainage Boards Consortium and other local Stakeholders.

The tidal defence structures provide defence to the areas inland and neighbouring these structures up to height predicted by at least a 1 in 200 year (0.5% AEP) event. The location of the closest defence structures to the site (on the Parrett, KSD, Andersea Main Rhyne and Sowy River) are shown in Figure 3.5.

Figure 3.5 EA Map Current Flood Defences



3.2.4 The Hydrological Regime

The most significant flood risk to the site is posed by an extreme tidal event, either from overtopping or breach of the Tidal defences. However, the flood risk from Fluvial sources is considered to be greater probability of impact than Tidal sources.

Regarding tidal flood risk, the site is located a significant distance from the tidal sluices of the River Parrett and the KSD which discharge to the Bristol Channel coast (8.5km). These tidal sluices and the embankments to the south and north are considered the most likely location for a breach in the tidal defences. If a breach occurs at one of these locations the speed of flood water inundation is considered to be significantly slow. The site is protected from flood water inundation from the north by the ridge of the Polden Hills, this means the route for flood water from the Dunball sluice and embankments north of Bridgwater to the site would have to pass through Bridgwater town and along the low lying land adjacent to the KSD or the Andersea Main Rhyne. The ground between this potential source of tidal flooding and the development site is crossed by a series of traditional field structures with many field hedgerows and drainage ditches, many running perpendicular to the perceived direction of flood water flow. This field structure is likely to slow the advance of flood water.

A tidal flood event is considered likely to take a significant amount of time to reach the site. Due to the consistent flat ground of the surrounding area, the resulting flood water is considered likely to be relatively shallow. The EA flood risk mapping shows the 0.5% AEP (1 in 200 year) flood outline (between flood zone 3 to flood zone 1) roughly crosses the middle of the site. This means that during a 0.5% AEP flood half of the site would be dry and the rest of the site would have a shallow flood depth. The flood depth of the southern side of the site is considered to be no more than 0.50m - 0.60m.

The site topographical levels show the site varies in level by approximately 1.0m from north to south, from 7.4m - 6.4m (respectively). The 0.5% AEP flood outline roughly crosses the centre of the site, at this point the centre of the site is considered to have a flood depth of approximately 0.0m. The measured ground level at the estimated location of the boundary of the 0.5% AEP flood is 6.80m AOD, the estimated flood depth at the southern boundary of the site (the greatest site flood depth) is considered to be no greater than 0.60m. The calculated flood depths, based on the estimated 0.5% AEP flood level of 6.80m AOD, are shown in Table 3.1. It should be noted that these are the predicted level/depth based on the undefended scenario.

Table 3.1 Flood Depths on the Development Site, 0.5% AEP (Undefended) Model

Site	Level, m AOD	Depth, m
Site access, Springway Lane (north)	6.83	0.00 (-0.03)
Existing working area (mean)	7.04	0.00 (-0.24)
Existing working area (lowest)	6.46	0.34
Proposed working area (mean)	6.56	0.24
Proposed working area (lowest)	6.45	0.35

Table 3.1 shows that although much of the development site has a predicted flood depth of between 0.2m and 0.4m, a large proportion of the site and the primary site access (to Springway Farm lane) has a flood depth of 0.0m, that is, will be dry in a 0.5% AEP flood event.

The local flood defence structures are predicted to provide protection to the site of between 0.5% to 0.1% AEP, therefore under the defended tidal flood scenario the predicted flood depth is considered to be 0.0m. The likelihood of a significant breach in the local flood defences is considered to have a probability of less than 1 in 200 years and is therefore considered less appropriate for this FRA than the defended scenario. The predicted flood level for all of the site under the defended scenario, of 0.0m, is considered more appropriate for the development location.

Regarding the fluvial flood risk, the site is located in the lower basin of the fluvial catchment of the River Parrett, surrounded by canalised drainage ditches of the Sowy, KSD and Andersea Rhynes. The area surrounding the site is relatively flat and so the rivers serving the site have a very shallow gradient, meaning the catchment is unlikely to be affected by flash flooding. During an extended peak storm event, water levels in the River Parrett catchment would rise relatively slowly, however to the north of the site is on an area of higher ground, above the tidal and fluvial flood level, providing a degree of protection to the site.

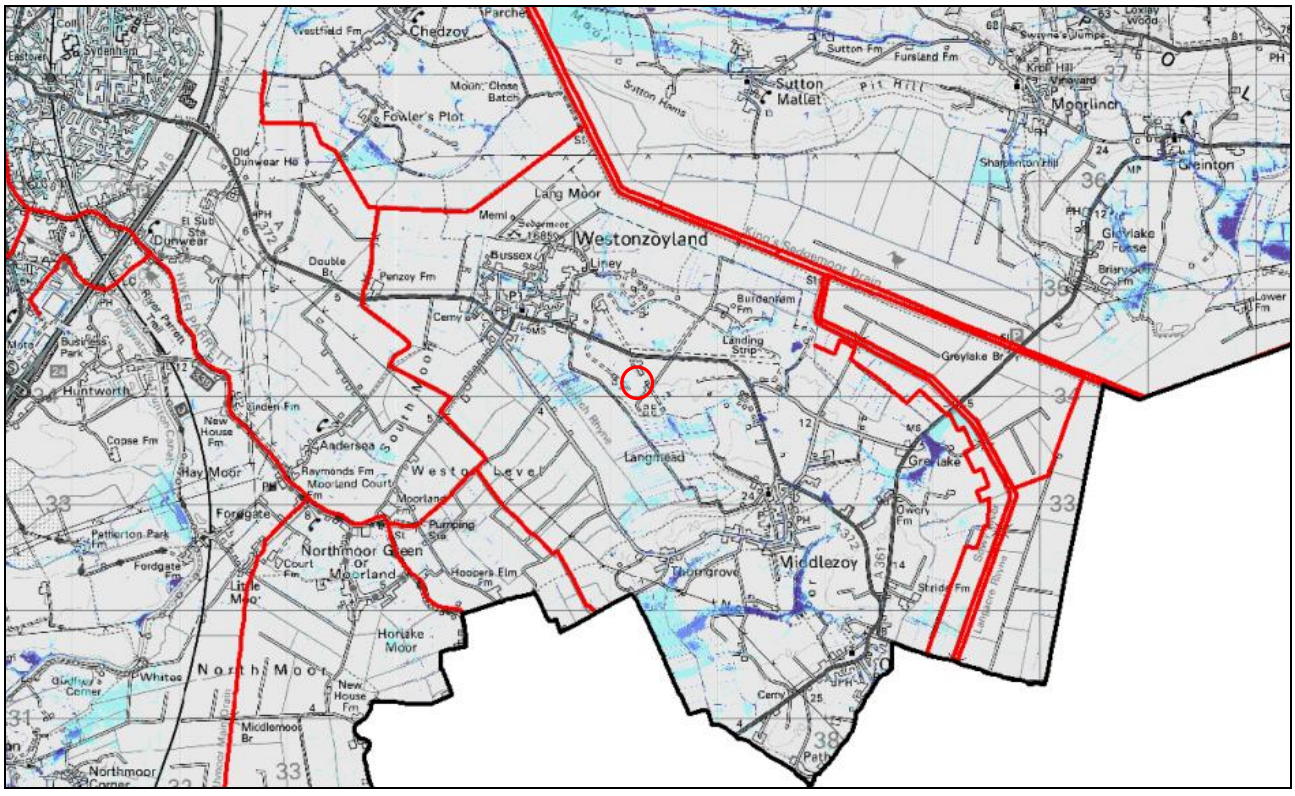
Experience from past fluvial flood events in catchments similar to the development area has shown that the time taken for a potential flood event to impact an area in such a low lying area would be relatively slow. There would be likely to be a number of flood indicators that could be reacted upon before the situation which leads to an experienced flood event on a site. These potential flood indicators would include a forecast of serious storms, during a period of Spring tides, local rivers being observed as being 'bank-full' and isolated, localised surface water flooding from drainage problems or 'seepage' from fluvial systems. In the event of the River Parrett over-topping during a fluvial event, the inundation of the site is considered likely to be slow and shallow, with low-lying pockets filling first, before whole areas are covered with flood water. The level of Springway Road and the A372 (Westonzoyland Road) is above the 0.5% AEP flood level and therefore is predicted to remain dry from flood water, in all but the most extreme events (outside the remit of this report).

3.3 Flooding from the Land (Surfacewater)

There have been no recorded historical surfacewater flood events affecting the site. The site and the surrounding area are relatively flat and so it is considered unlikely that surface water will flow onto the development site from external (adjacent) catchments. The predicted surfacewater flood mapping provided by the Sedgemoor SFRA Level 1 report is shown in Figure 3.6.

The surfacewater generated by the proposed covered areas will be collected by a new surfacewater drainage system and discharged to a sub-surface soakaway tank. This is dependent on further design development and permeability tests, see Section 5 for more details.

Figure 3.6 SFRA Level 1 Surface Water Flood Map

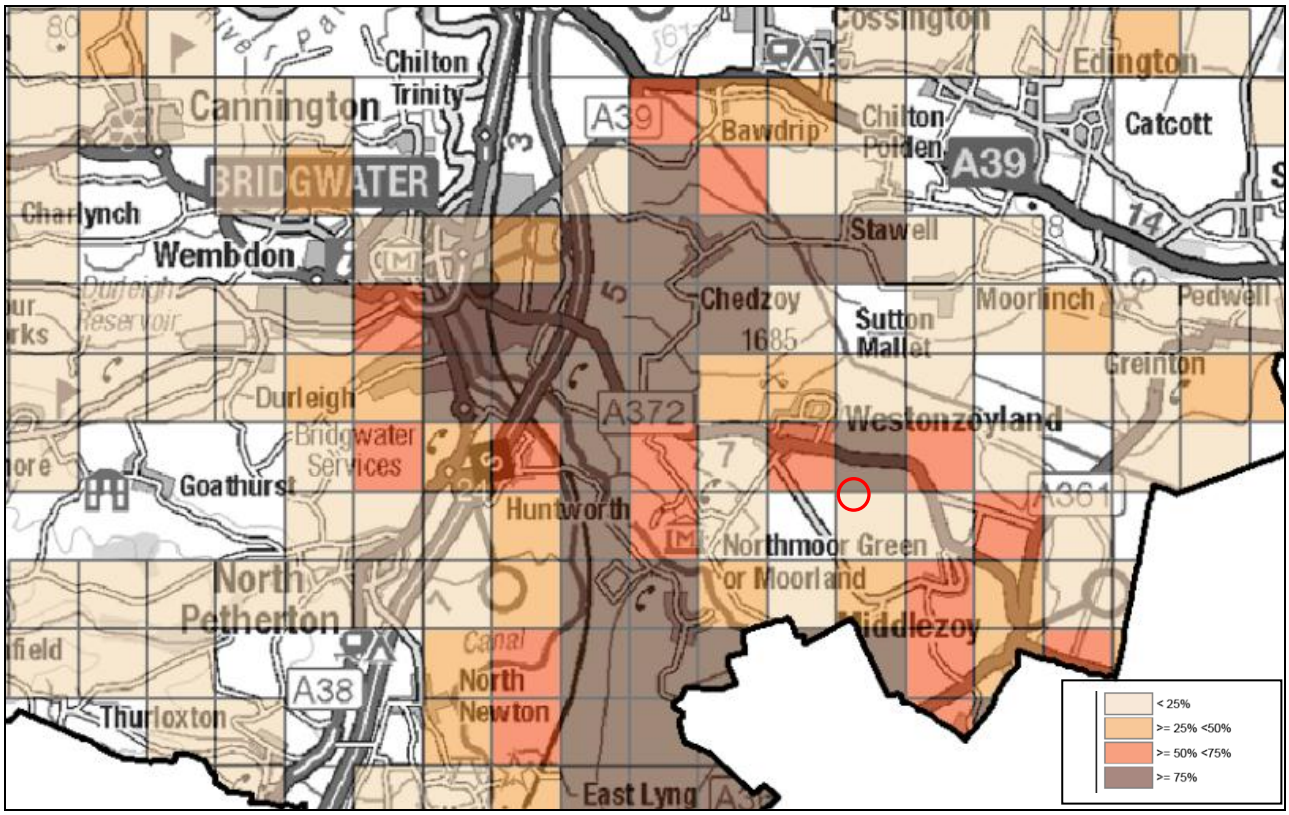


3.4 Flooding from Groundwater

The SFRA states that there are no recorded flooding events originating from a raised groundwater, near to the site. The geology of the site is that of a bedrock of Mercier Mudstone Group (Mudstone and Halite-stone) and superficial deposits sand and gravel. A geology of this type does not form good conditions for an aquifer or pose any significant risk of spring sources. Due to the presence of the gravels, there is possible for groundwater breakout where the clay cap allows, however the risk of this is considered to be low to moderate. The Sedgemoor SFRA Level 1 Report shows mapping of ground susceptible to Groundwater flooding, shown in Figure 3.7.

The site will be 97% surfaced with concrete, asphalt or buildings. The risk of groundwater impacting the site by breaking through permeable soils is therefore very unlikely. The risk from Groundwater flooding is therefore considered to be Low.

Figure 3.7 SFRA Level 1 - Areas Susceptible to Flooding



3.5 Flooding from Sewers

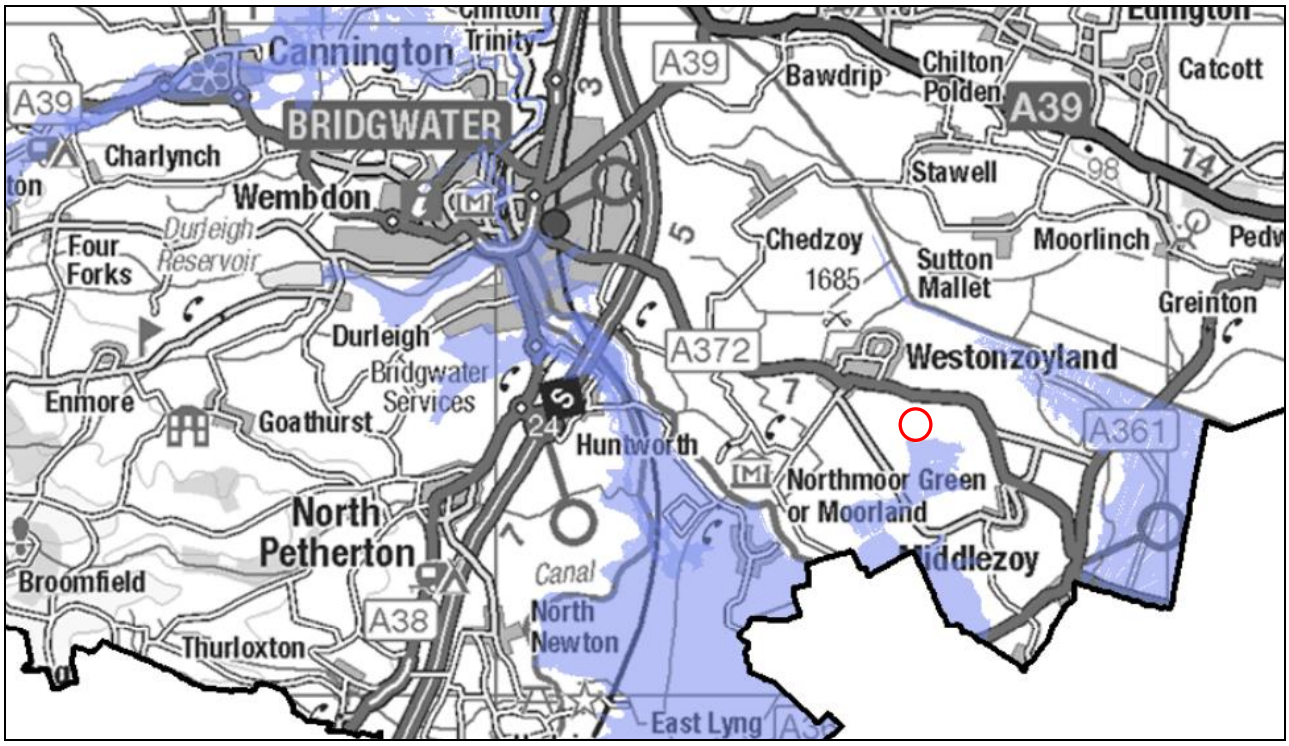
Data provided by Wessex Water, Sedgemoor DC and the EA in the Sedgemoor SFRA shows that although there have been incidents of sewer flooding in the Bridgwater area there are none recorded in Westonzoyland or near to the development site. The site is not connected to foul sewerage and so it is very unlikely for the site to be affected by flooding originating from the sewerage system.

3.6 Flooding from Artificial Sources

The artificial sources that might pose a risk to developments within the Sedgemoor District are 4no. open reservoirs and the Bridgwater to Taunton Canal. The nearest large artificial water body to the site is Durleigh Reservoir, at 7.6 km. The Bridgwater to Taunton Canal is 3.1km away, at Huntworth.

Because of the flat topography of the surrounding site, the influence of a breach in artificial sources has the potential to affect large areas of Sedgemoor. The extent of the predicted flood risk from artificial sources is shown in the SFRA Level 1 Report, in Figure 3.8. This mapping shows the flood risk posed by both of these sources are unlikely to affect the development site is considered negligible.

Figure 3.8 SFRA Level 1 - Flooding from Artificial Sources



3.7 Impact of the Development on Neighbouring Properties

The development plot is to the southwest of the Springfield Lane Business Park and is currently mostly surfaced with impermeable concrete and asphalt surfacing. The development site was previously used as an airfield and informal quad bike track, the proposed development will involve the processing and storage of inert materials including top soil, hardcore and woodchip for relatively short periods.

The development is unlikely to lead to any significant increase in employed staff and/or visitors using the site and will not result in persons occupying the site over night. The development will result in a relatively small increase in impermeable area of the site, from 1.02Ha to 1.07Ha, an estimated increase of 4.4%; this is considered to be relatively minor. This small increase in impermeable area will have the knock-on impact of generating more excess surface water runoff from the site, however this too is considered to be relatively minor. Surfacewater runoff from the existing site drains to the adjacent land, mainly to the south, this situation will be improved. It is proposed that surfacewater runoff will be captured from the operational areas and the building and discharged to a sustainable

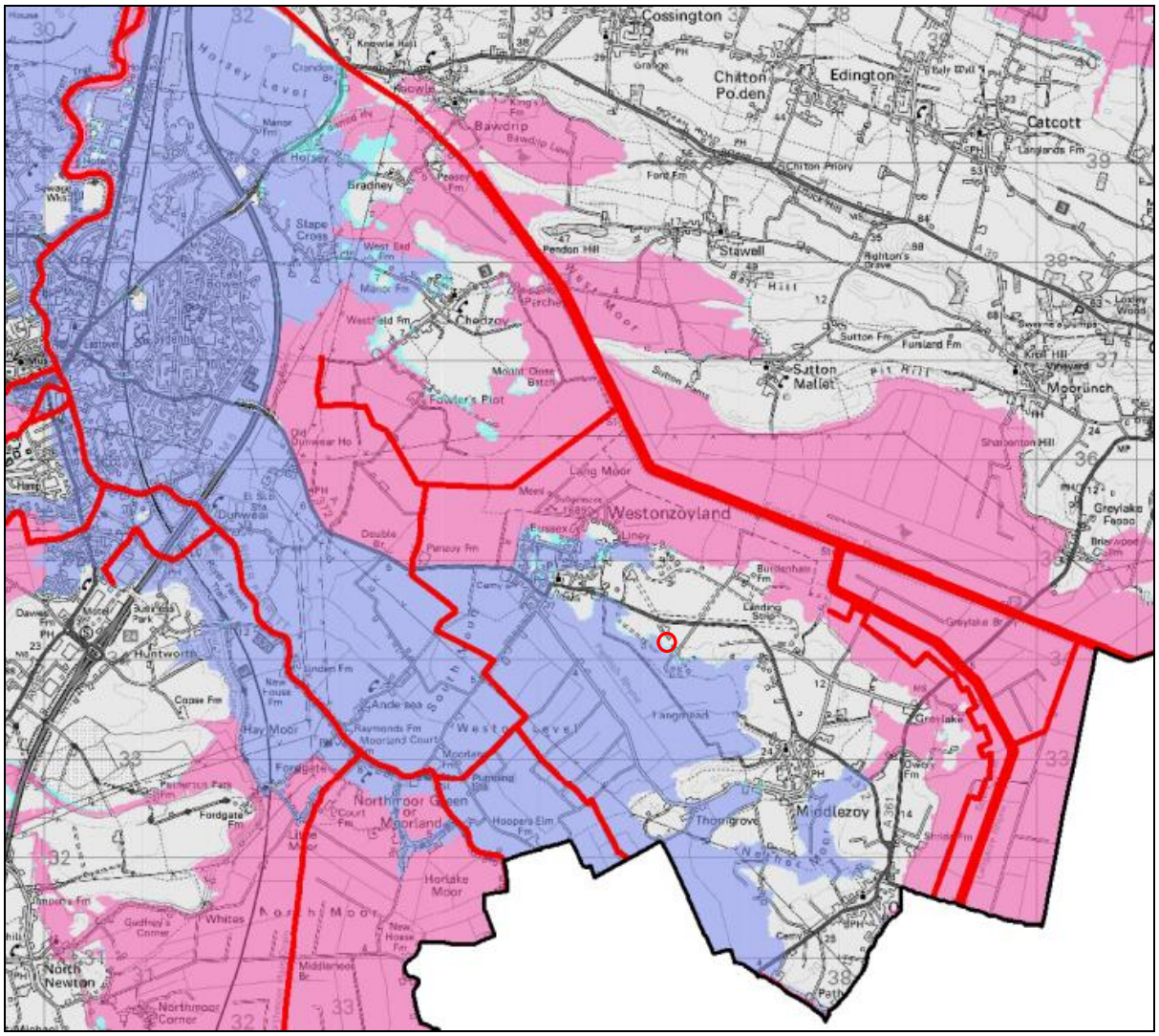
drainage system. Runoff from the Processing Area will be contained (by Sleeping Policemen) and discharged to a separate drainage tank, to be treated separately.

Surfacewater runoff from the site will drain to the south and be collected by an open channel drain, extending along the southern perimeter of the site, this will collect and hold all of the runoff and discharge it to a soakaway, within the site. The operational areas will process raw materials considered to be inert and the quality of the runoff from those areas is considered likely to be inert as well. Surfacewater runoff from the central Processing Area will be collected, by a bunded area, and discharged to a storage tank, for collection and will not impact neighbouring areas.

The land neighbouring the southern boundary of the site is a Designated Site or bounds with a Designated Site called Langmead and Weston Level Site of Special Scientific Interest (SSSI), an area of land containing sensitive lowland meadows, the drainage of this area is described in concept in Section 2.3. The development area would have historically drained to the south, towards this area, but with changes to the drainage and operation of the site the site will have no measurable impact on the SSSI. Further from the site, approximately 1.8km to the northeast, is the edge of the Somerset Levels and Moor Ramsar Site, also a sensitive lowland meadow. The area of the Somerset Levels and Moors Ramsar site is considered spatially separate from the site and not connected by drainage. The Ramsar site is separated from the site by two metalled highways and there is no risk of localised surfacewater runoff from the development area having any measureable impact on the Ramsar site.

The development will not lead to an increase in the volume of permanent (enclosed) structures in the floodplain (such as buildings etc), although it is likely to result a temporary increase in volume in the flood plain from the presence of the temporary piles of inert recycled material. The stockpiled materials are estimated to potentially inhabit approximately 40% of the operational site, with an approximate ground area of 5018m^2. If the mean flood depth (in a 0.5% AEP event) of the operational site is calculated as 0.24m, then the calculated (predicted) flood volume of the stockpiled material would be 1204m^3. The area of the predicted, undefended (theoretical), tidal flood plain affecting the area to the east and south of the River Parrett and River Brue is estimated to be in excess of 70km^2 (7,000Ha or 70,000,000m^2), see Figure 3.9 for context. If the nominal theoretical flood depth of the larger tidal flood plain (affecting the site) is 0.3m the estimated volume of the flood plain would be 21,000,000m^3; with a theoretical flood depth the volume of 0.5m the volume of the flood plain would be 35,000,000m^3. If the potential increase in volume in the flood plain by the development (from the stockpiles) of 1204m^3 is compared to the estimated existing volume of the flood plain of 21,000,000m^3, it is possible to see that the proposed increase in volume is negligible relative to the estimated area of the existing flood plain. If the impact of the temporary volume in the flood plain is compared to the area of that flood plain it is possible to calculate the potential increase in depth of that flood plain. It is estimated that the depth of the existing flood plain would increase by approximately 0.02mm, due to the additional (temporary) volume of the stockpiles. The impact of the proposed development on the potential flood depth of the neighbouring properties is considered to be virtually immeasurable and negligible.

Figure 3.9 Flood Map of the Area, showing the Tidal Flood Plain Affecting the Site



3.8 Summary of Flood Risk to the Development

Just over half of the site is within the Tidal Flood Zone 3a, with an annual flood risk of 0.5% AEP, with the rest of the site in Flood Zones 2 and 1, with an annual flood risk of 0.1% or less AEP. The mean 0.5% AEP flood level for the site has been estimated as being 6.80m AOD, based on the measured ground level (from the topographical survey) where the boundary of the local 0.5% AEP flood outline crosses the site. The flood model on which Flood Zone is based is the EA undefended model, the defended model would show the site area as being dry. The overall flood risk to the site from rivers and sea is classified as being of 'Very low' risk.

The flood depth at the access and northern part of the site is considered to be 0.00m, remaining dry in a 0.5% AEP event (by 0.03m). The southern part of the site is estimated to have a mean flood depth of 0.24m and a maximum of 0.42m. The proposed operation is predicted to involve the potential temporary stockpiling of inert material on 40% of the hardstanding (concrete surfaced) area, equating to an estimated area of 5018m^2 and volume in the flood plain of 1204m^3.

The development will result in a relatively small increase in impermeable area (4.4%), which could lead to an equally small increase in surface water runoff from the site. However new drainage systems are proposed that will collect runoff from the operational impermeable surfaces, built structures and the Processing Area. The proposed surfacewater drainage system will discharge to a sub-surface soakaway tank and the proposed wastewater drainage system will discharge to a storage tank, to be dealt with separately.

The development has the potential to displace a moderate volume of flood water, however this will have a negligible effect on the flood plain of the neighbouring properties. The tidal flood plain affecting the site has been estimated as having an approximate area of at least 70km^2 and an estimated volume of at least 21,000,000m^3. The potential temporary displacement of 1204m^3 will result in a potential increase of 0.02mm across the whole catchment. This is considered to be negligible.

The risk of flooding from Groundwater is considered low and the risk from artificial sources or the sewerage network is considered to be negligible.

4 NPPF AND THE PROPOSED DEVELOPMENT SITE

4.1 Sequential Test

4.1.1 Sequential Test Concept

The proposed development involves the creation of Materials Reprocessing Facility on a redundant plot of land once used as an RAF airfield and more recently as an informal quad bike track and currently used to store top soil, stone and wood. This involves construction of a Sorting Shed building and small number of covered operational bays on the existing surfaced area. The development will involve no change of Vulnerability, being both 'Less Vulnerable'. It is considered that this type of development will require a Sequential Test.

The Technical Guidance to the NPPF Flood Risk Vulnerability and Flood Zone Compatibility, identifies that land used for material reprocessing as 'Less Vulnerable' development and as such is considered 'appropriate' for location within Flood Zone 3 as long the site satisfies the following criteria: a) is considered an environmental benefit, b) is safe to its users and c) that there are no other appropriate alternative sites are available in an area of lesser flood risk.

4.1.2 Sequential Test Process

A Sequential Test was undertaken, following the guidelines in the NPPF. A search was undertaken for any appropriately available land, that could accommodate a similarly sized development proposal and that were appropriately priced. The proposed development is located to the east of the rural settlement of Westonzoyland, it was considered appropriate for this scheme to limit the search area to sites within Sedgemoor, to the east of Bridgwater and south of Highbridge.

The search for appropriately alternative sites in this area of Sedgemoor was undertaken by recording all development land advertised as being available (for sale). Appropriate development land is identified as vacant land, of a size able to accommodate a development of similar proportions, large enough to provide space for a material reprocessing facility, in an appropriately sited and accessible location. The existing site is approximately 1.37Ha, an alternative site would need to be no smaller than 80% of the existing site (1.10Ha) and for management purposes would not need to be more than 150% of the existing site (2.06Ha). The site is approximately 9km southeast of the next nearest material reprocessing facility, at Pawlett and is 6-8km from the boundaries with Taunton Deane, South Somerset and Mendip District Councils (respectively), it is considered an appropriate distance to search is a radius of 6km from the site. The value of the alternative sites should be similar to that of the existing, with a value up to £800k. The search for sites was carried out with Estate Agents advertising on the Rightmove website, in May 2018, searching for all vacant development land, of between 1.10Ha and 2.06Ha, within an accessible and suitable location of east Sedgemoor (within 6km of the site). The results of the searches are shown in Table 4.1.

Table 4.1 Appropriate Alternative Available Sites to the Springway Lane

Address	Zone	Comments
A - Gillards Transport, Lyng Farm, Riverside, Burrowbridge	3	Large plot with outline planning for 25 dwellings, greater flood risk and flood zone to proposal
B - Petherton Park Farm, North Petherton	3	Moderate house with large amount of land, similar flood risk and undeveloped pasture land with planning issues
C - West End Court, Chedzoy Lane	3	House, greenhouses and approximately 0.7Ha land, similar flood risk area and smaller site
D - Northmoor Lane, East Lyng	3	House and formal gardens, to 0.6Ha, similar flood risk area and smaller site
E - Littlemoor Drove Fordgate	3	House and formal gardens, to 0.8Ha, similar flood risk area and smaller site
F - Middlemoor Drove, Coxhill, North Newton	3	Moderate house with large amount of land, similar flood risk and undeveloped pasture land with planning issues
G - Pathe Road, Pathe	3	Moderate house with large amount of land, similar flood risk and undeveloped pasture land with planning issues
H - Plum Lane, Dunwear	3	Moderate house with small amount of land, similar flood risk and undeveloped pasture land with planning issues, too small

The Sequential Test is assessed as follows:

1. All of the sites within the test area, were in a similar area (or greater) of flood risk and the same flood zone;
2. Three of the sites (C, D and H) were considered either too small or significantly smaller than the test site;
3. Four of the sites were on undeveloped land, which would involve significant planning issues to gain approval.

As there are no other suitable alternative sites that are in a lesser flood zone and allow effective development (size, access, planning) the Sequential Test is considered passed.

4.1.2 Appropriate Development

Land designated for Use Class B1 and B8 is considered acceptable for Flood Zones 1 and 2 and is considered acceptable for Flood Zone 3 as long as the Exception Test is passed.

4.2 Exception Test

An Exception Test is considered to be necessary, as the development area is within Flood Zone 3a. The principles of the test have been followed where practicable, these points are described below:

- **On previously developed ground**. The proposed business development is constructed on a redundant area of land once used as an RAF airfield and more recently for a quad bike track, mostly surfaced with concrete hardstanding.
- **Sustainable benefit.** The site is considered to provide a 'wider sustainable benefit that outweighs the flood risk' through the reuse of redundant Brownfield land for the use of recycling inert materials;
- **Development considered 'safe' for occupants and neighbours.** The site is modelled as being a 'Very low' overall flood risk, approximately 40% of the site is within Flood Zone 1, the rest of the site has a mean flood depth of 0.24m and a maximum flood depth of 0.42m. The development will result in a small increase in surfacewater runoff (4.4%), however new drainage systems will be installed to collect and treat any runoff. Surfacewater runoff from the operational areas and buildings will be collected and discharged to a sustainable drainage system, surface runoff from the Processing Area will be contained and discharged to a tank to be treated appropriately. The development will result in a small increase in volume in the flood plain, but will have a negligible impact on the surrounding flood level. Additionally, the site will not be affected by groundwater, artificial sources or at risk of flooding from sewers.
    - **Sustainable Building Materials**. The proposal includes the construction a Sorting Shed and covered operational bays. The proposed building will be constructed from modern and simple materials, considered as being flood compatible, where practicable, with an open structure that will allow the free flow of flood water. All electrical sockets, where required, will be located at least 0.9m above ground level, this is approximately 0.5m above the maximum estimated flood level. The full details of construction materials have not been provided to the author, further details can be provided in the Design Statement or at Discharge of Conditions.
    - **Flood Refuge and Evacuation**. The northern half of the site and land extending to the A372 is within Flood Zone 1 and will remain dry in a 0.5% AEP flood event. This area can effectively be used as a Flood Refuge area during a flood event. A more detailed Flood Warning and Evacuation Plan can be produced at the Discharge of Conditions stage, if required.
    - **Flood Warning.** The site owners will be advised to sign up to of the EA Flood Warning Service. The EA will be provided with contact numbers for the owner(s) of the property, who will be made aware of the potential impact of a tidal or fluvial flood event.
    - **Flood Risk to the Catchment.** The proposed development is impacted by a tidal flood plain of significant size and is considered to create a negligible increase in risk to the existing properties adjoining the boundary of the site. The proposal has the potential to result in a small increase in surfacewater runoff from the site, however all surfacewater runoff will be treated appropriately and sustainably. The proposal involves in a new Sorting Shed building, however this is open and will not displace a significant volume in the flood plain and is unlikely to significantly restrict the flow of flood water.
    - **Mitigation/Compensation Works.** The size of the proposal and constraints of the development area means that additional (mitigation) works were considered not practicable. Drainage systems will be installed, which will collect and treat runoff appropriately.

5 SURFACEWATER AND FOUL DRAINAGE DESIGN

5.1 Existing Surface and Foul Water Drainage

There is little or no formal surface water or foul drainage on the site. The excess surface water from the existing hard surfaces, mainly concrete, ponds in places and then runs off of the site to the adjoining areas of slightly lower ground, mainly to the south. The areas to the south and southwest include parcels of agricultural land including improved pasture and semi-improved pasture, respectively. These areas, adjacent to the development, are considered likely to have a moderate-good soil permeability (as described in Section 2.5) and so excess surface water would be likely to adequately drain away to the sub-surface soils.

There is no foul drainage system or connection to the public (Wessex Water) sewers on the site.

5.2 Proposed Surfacewater Drainage System

Simple surfacewater drainage systems will be installed to collect and treat the surfacewater runoff from the operational area and proposed built structures. This system will have the Concept Design as follows:

- Guttering on the Storage Shed building will collect surfacewater and transfer it to sub-surface pipework;
- An open channel drain will extend the full length of the site, on the southern perimeter, this will capture all surfacewater runoff from the main operational area;
- The open channel drain will terminate in a concrete bay, with a surface gully, transferring all collected water to subsurface pipes;
- The open channel drain will be fitted with check dams (demountable weirs) to allow sections of the ditch to be isolated from the discharge point, if required;
- Sub-surface pipework will transfer surfacewater to a single sub-surface soakaway tank, to the southeastern corner of the site;
- Most usual design of Soakaways is to construct tanks from drainage 'crates', wrapped in woven geotextile fabric, with inspection chambers at point of entry and centre of tank;
- Design of Soakaway tanks not yet determined, as depends on location, soil permeability and site management, however tanks will be sized following the guidance of Building Regulation standards (Approved Document H - 2010), BRE Digest 365 and BS EN 752-4.

The size of the soakaway was estimated, at this stage, diagrammatically to establish whether there was adequate space on the site for their arrangement. The exact size of the soakaways will be determined at the details design stage, usually completed for Discharge of Conditions, in a Drainage Strategy document. There is ample vacant space within the site ownership, to the southern end of the operation area, for the siting of a soakaway tank.

NB. Evidence of the surfacewater calculations can be provided or full rainfall and runoff calculations will be undertaken, by HES Ltd, separate to this document, as proof of feasibility, if required.

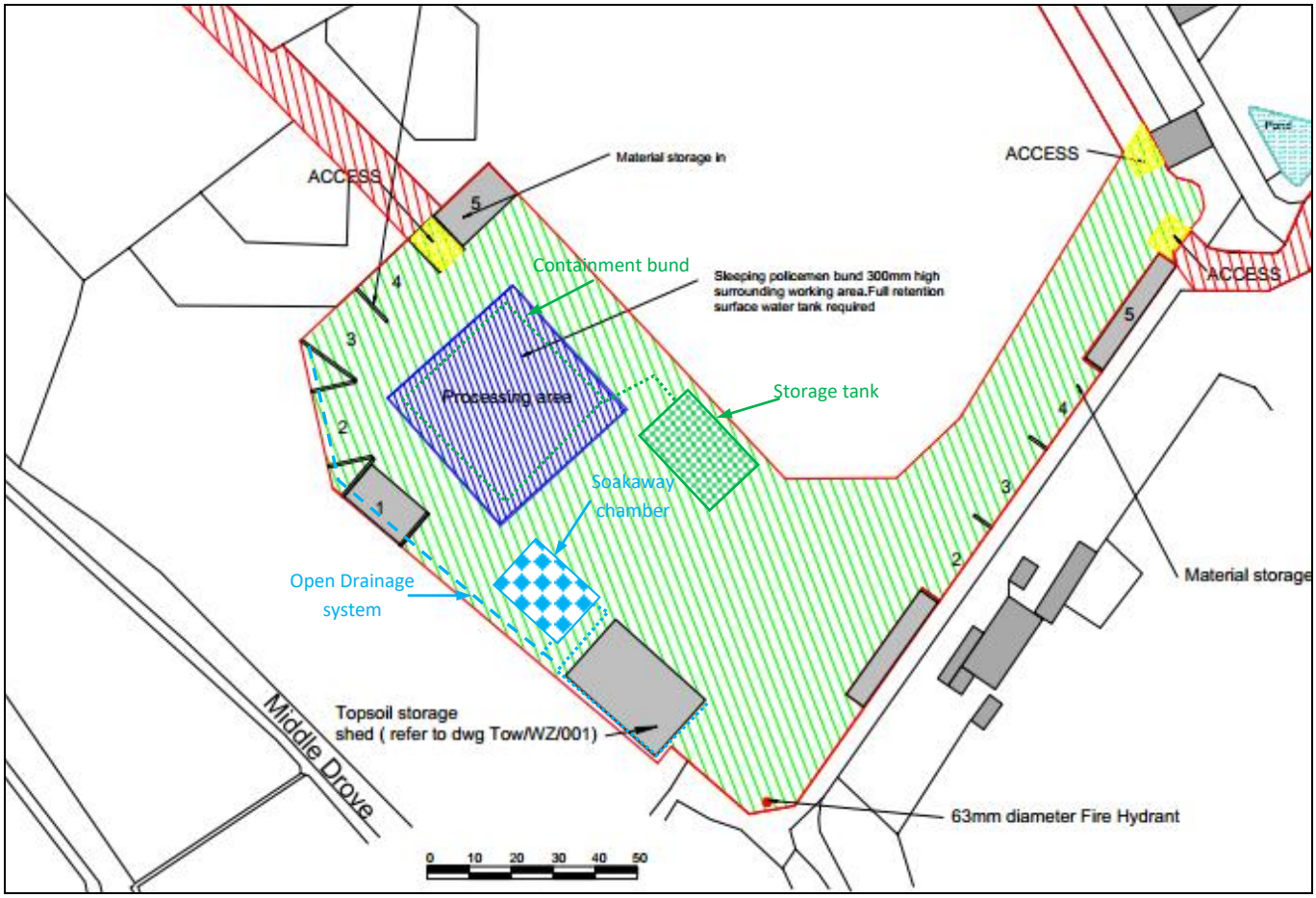
An option for the design of the drainage is shown in Figure 5.1, not to scale. Further details of the design of the surfacewater drainage of the Operational Area and built structures will be outlined in the Drainage Strategy document.

5.3 Proposed Foul Drainage System

There is no proposal for formal foul drainage or sewerage on the site. Toilet facilities for staff and visiting operatives will be provided by temporary/mobile toilet units (Portaloos), within the eastern side of the site, to be confirmed.

Drainage will be installed to capture the potentially 'dirty' surfacewater from the Processing Area. This surfacewater will be kept separate to the surfacewater from the main operational area and built structures and treated like wastewater. Low, 300mm, 'sleeping policemen' will be arranged on the perimeter of the Processing Area to contain surfacewater generated in that area. Surface gullies and channel drains will capture the surfacewater and transfer it to a sub-surface storage tank. Wastewater collected in the storage tank will be treated appropriately, as liquid with a high-particulate, but potentially inert nature. An option for the design of the drainage is shown in Figure 5.1. Further details of the design of the surfacewater drainage of the Processing Area and the fate of the wastewater collected will be outlined in the Drainage Strategy document, as above.

Figure 5.1 A Possible Option for the Drainage System Layout (Draft arrangement)



6 CONCLUSION AND RECOMMENDATIONS

This report has outlined the potential flood risk posed by the proposed development of a Materials Reprocessing Facility from a variety of sources, as defined by the Technical Guidance to the National Planning Policy Framework. The development includes the construction of a single-storey open barn-style building for the temporary storage of products and covering of the operational bays. The development area is shown by the Environment Agency's flood zone mapping to be partly (60%) within the Tidal Flood Zone 3 (0.5% AEP) and partly within Food Zones 2 (5%) and 1 (35%). The access to the site is from an area of Flood Zone 1. The Sedgemoor District Council SFRA shows that the area of Flood Zone 3 impacting the development site and surrounding area to be classified as Flood Zone 3a. The site is also at risk from fluvial flooding, however this is considered to be a slightly lesser theoretical risk than from tidal flooding.

The main flood risk to the site is from a tidal inundation of the site, from overtopping the flood defences on the Bristol Channel and/or banks of the River Parrett (to the west) or the tidal sluice of the King's Sedgemoor Drain, leading to inundation from the KSD, Sowy River or Andersea Rhyne. The development site is provided some protection from local earth bank defences on the Main Rivers and significant drainage rhynes and from the tidal sluice to the Parrett. The overall flood risk to the site from rivers and sea as shown by the EA mapping is classified as being of 'Very low' risk and the northern half of the site is considered to remain dry in a flood event up to a 0.5% AEP event.

The proposed development is considered to create a negligible increase in risk to neighbouring properties. The proposal will result in a small increase in surfacewater runoff (4.4%), a small but not significant increase in volume in the flood plain and only a small increase the number of people working in the flood plain. The risk of flooding from Groundwater is considered low, the risk from artificial sources is considered to be negligible and there is no risk of flooding from sewers.

The Sequential Test was considered passed; test was undertaken of appropriately alternative sites in the east Sedgemoor area, with no sites in a lesser flood risk area being found. The Exceptions Test is also considered passed; the operational building will be constructed on reused Brownfield land, built level with surrounding ground, with an open (barn-like) water compatible form. The northern side of the site is in Flood Zone 1 and provides a safe emergency refuge on the site, electrical sockets (if required) will be 0.9m above ground level, the building will use flood resilient materials and the site owners will be made aware of the EA's flood warning system.

Surfacewater drainage systems will be installed, collecting runoff from the impermeable surfaces. Excess surfacewater will be collected from the operational area and built structures by an open channel drain on the southern perimeter and treated via sustainable drainage systems, probably a sub-surface soakaway. Surfacewater collected by the bunded Processing Area will be treated as wastewater and stored in a sub-surface tank for further treatment or collection. The size and location of the tanks will be determined, after soil testing and discussions on site operation, to be confirmed in the Drainage Strategy report, normally at the Discharge of Conditions stage.

In summary, the proposed development is partly within Flood Zone 3a, although the main access is through Flood Zone 1, the area is protected by flood defence structures and is considered by the EA to be of 'Very low' risk. The mean flood depth of the area (from a 0.5% AEP event) is 0.24m, with a maximum depth of 0.42m, the site is considered to stay mostly dry during a flood event. The development will create only a negligible increase in risk to neighbouring properties, but this will be mitigated by an improved drainage system and an open design of built structures. The risk of flooding from Groundwater is considered low and the risk from artificial sources and sewers is considered to be negligible. The site is therefore considered acceptable for the proposed development.

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APPENDIX - Photographs of Site taken during Site Survey

AA.1. Operational bays on northern site, new primary access in background, looking northeast

AA.2 Centre of site, small stockpiles, with agricultural fields either side, looking northwest

AA.3 Southern end of site, concrete surfaces and walled bay, looking southwest

AA.4 New primary access off A372 on to site, looking northwest

AA.5 Old secondary access off Springway Lane, looking east

AA.6 Bay to south of site and site of Storage Shed and fields to south, looking southwest

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Harcombe **E**nvironmental **S**ervices

Ecology, Flood risk, Drainage, Contaminated land, Sewage treatment, Odour

Date: 07 July 2017
Our ref: DAS/2827

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Hornbeam House
Crewe Business Park
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BY EMAIL ONLY

Dear Rebecca Bomers

Discretionary Advice Service (Charged Advice)
DAS/216969
Development proposal and location: Former airfield, land off A372, Westonzoyland

Thank you for your consultation on the above which was received on 01 June 2017.

This advice is being provided as part of Natural England's Discretionary Advice Service. Towens Waste Management Ltd. has asked Natural England to provide advice upon:

- The potential impacts on designated sites within the vicinity of the proposed waste management facility. This is to inform an Environment Agency waste permit application.

This advice is provided in accordance with the Quotation and Agreement dated 14th June 2017 and is based upon the following information:

1. Outline of proposal. Supplied in an e-mail by Rebecca Bomers, Environment Manager, 8th June 2017.
2. Verbal Communication with Mr Towens & Rebecca Bomers. Site meeting, 21st June 2017.
3. Proposed permit details & Environment Agency Risk Assessment. Supplied in an e-mail by Rebecca Bomers, Environment Manager, 21st June 2017.

Site Report
Site description and context
This 1.21ha site is located within an industrial estate on a relict World War 2 (WW2) airfield. It is bounded by an access road to the south-east, arable cropping to the north-east and rough ground along its western boundary.

The footprint of the site is currently hard standing, with the exception of an old landfill where illegal tipping took place. This area is undergoing clearance and the proposal is to backfill and top with crushed stone. A slight incline of the site towards the south-west can be detected.

The area of hard standing is stacked with wooden pallets following previous occupancy. The pallets are in the process of being chipped and removed from site to a biomass boiler.

The site is serviced by an old drainage system associated with the WW2 airfield. This could potentially be nothing more than an old collapsed soak away but further investigations are proposed. The site is also supplied by mains water.

Project proposal description
Based on the information provided to date by Towens Waste Ltd., it is Natural England's understanding that applications will be submitted to the Environment Agency (EA) for an Environmental Permit (Waste management), and to Sedgemoor District Council for planning permission to construct and operate a waste management facility. The site is intended to be used for the following:

- Crushing hardcore to produce 6F5 product under the WRAP protocol
- Screen road planings to produce 6F4 under the WRAP protocol
- Chip clean wood to produce wood chip for biomass boilers
- Shred green waste for transfer to another site for composting
- Screen soils to produce manufactured top soil to PAS standard.

The above wastes are listed as 'non-hazardous' under EA Standard rules, Chapter 4, The environmental permitting (England and Wales) Regulations 2010. The exception being green waste and wood which by permit will require a sealed drainage system as a minimum mitigation measure. No further drainage is planned for the site.

To establish an environmental monitoring baseline Towens plan to collect groundwater, ditch water and soil samples from the surrounding land. No further monitoring is planned.

Fine particles will be suppressed by mist spraying to avoid dust spread. Towens Waste also own their own fleet of road sweepers and the site will be kept clean following vehicle movements.

Soil will be processed within a building which will potentially occupy the southern corner of the site. Bays for incoming waste will also occupy the southern edge of the site. Green waste (primarily plant clippings and tree branches) will be brought in fresh and will leave the site within 48hrs. Bays for waste transfer out of the site will occupy the north-eastern edge of the site.

The site is not connected to the main sewerage system and toilet and washing facilities will be via portable toilets. No machinery will be stored on the site overnight.

Designated Sites
Langmead and Weston Level Site of Special Scientific Interest (SSSI) is located approximately 250m south of the site at its nearest point, with King's Sedgemoor SSSI 2km to the south-east. These statutory nature conservation sites are of national importance.

Langmead and Weston Level SSSI is notified for its species-rich neutral grassland, aquatic flora and aquatic invertebrates associated with the lowland ditch system. A variety of wetland plants are present both in the water and on the banks to include the notable Frogbit (*Hydrocharis morsus-ranae*), Pondweeds (*Potamogeton* spp), and Water starworts (*Callitriche* spp). The ditch invertebrates recorded on the site include four nationally rare and twenty-one nationally scarce species, including three beetles.

King's Sedgemoor SSSI is also part of the Somerset Levels and Moors Special Protection Area (SPA) and Ramsar Site. The site attracts internationally significant numbers of water birds in winter (1 October to 31 March). The SPA, a statutory nature conservation site of international significance, is classified as such on the basis of its overwintering populations of Bewicks Swan (*Cygnus columbianus bewickii*), Golden Plover (*Pluvialis apricaria*),Teal (*Anas crecca*) and Lapwing (Vanellus vanellus), and a winter assemblage of 58,093 waterfowl. King's Sedgemoor is also one of a series of SSSI's which make up the Somerset Levels and Moors Ramsar Site. A designated wetland of international importance, the European site attracts internationally important numbers of wildfowl in winter and is one of the most important sites in southern Britain for breeding waders. This inland European site is also used by birds from the Severn Estuary Special Protection Area (SPA) and Ramsar Site, as alternative winter feeding grounds. The network of rhynes and ditches on King's Sedgemoor support an outstanding assemblage of aquatic invertebrates.

Potential effects on designated sites
The principal issues for consideration are:

- Noise
- Leachates/surface runoff
- Particulates

Noise effects
The operational phase of waste processing, most notably aggregate crushing and wood chipping will generate high levels of noise which has the potential to be wide reaching. Water birds are sensitive to noise disturbance.

Natural England guidance currently suggests that birds begin to react to a noise level of above 55dB. As a general rule, if the noise source is no more than 3dB higher than background noise levels, then Natural England accepts that it is unlikely to be significant. However, knowledge of the site indicates low use of Langmead and Weston Level SSSI by SPA and Ramsar wetland birds, as potentially the land could offer supporting habitat to these European Site qualifying species.

King's Sedgemoor is approximately 2 km away from the proposed waste treatment facility site boundary. The distance from King's Sedgemoor will is likely to limit the potential noise effects on Somerset Levels and Moor's SPA, Ramsar and SSSI species. That said a 'noise and vibration management plan' is required as part of any waste permit application where sites are likely to cause pollution outside of the side, and it will need to provide information to conclusively rule out any negative impacts on the SPAs, Ramsar Sites and component and non-component SSSIs.

Leachates/surface runoff
The main risk is potential pollution and site run off effecting environmental receptors, in particular entering the surrounding ditch system associated with Langmead and Weston Level SSSI.

The site is principally under hard standing which inclines slightly towards the south-west. An area of rough ground divides the site from the SSSI, the boundary of which is marked by a several metre high bank lined with trees and scrub which in itself acts as a natural bund and screen. A clear height differential exists between the site and the SSSI, as the land drops down to the SSSI.

The main opportunity for surface water leaving the site and entering the ditch water system would potentially be in high flood events. This could present an issue with increased surface water flow following the line of a farm track leaving the site. An interception system would mitigate the effects on notified features. Consideration should be given to the potential for drainage in the site design. Further drainage studies to investigate estimated flow rates of surface water runoff in flood conditions would also help confirm if additional surface water drainage is required.

Green waste and wood will require a sealed drainage system. If a high volume of water passes through the sealed drainage system during flood conditions without suitable storage capacity there is a risk, albeit a low risk, that leachates may eventually reach the ditch system. This along with particulates leaving the site pose the main risks as far as contaminants are concerned.

Dust and aggregate particulates
Particulates leaving the site via surface water has been considered in the section above.

Particulate fall out from wind-borne material is also a consideration. Prevailing winds west to east would carry particulates away from the SSSI in the main. Airborne pollution should be prevented on days when winds carry particulates north to south towards the SSSI. Suppressing fine particles through mist spraying when working aggregates will go some way to alleviate this. The site is screened from the SSSI by a high bank with tall mature scrub and trees, which is potentially also adequate to mitigate the effects in average wind conditions. As this bank falls outside of Towens land ownership replacement screening may need to be provided in the future and should be a condition of the development.

Summary
Based on the information provided to date Natural England considers that the operations proposed pose potential pollution risks to nearby SSSIs.. We have highlighted potential avoidance and mitigation measures that need further consideration to ensure that those risks are addressed and to inform any formal applications and consents that are progressed.

Annex 1.
Advice around protected species has not been requested as part of the DAS contract. However the site and surrounding land offers good habitat for reptiles. The use of the site by Adders was also noted in verbal communication with Rebecca Bomers the Waste Manager. Adder, Grass snake, Common lizard and Slow Worm are all protected by UK law and could be utilising the site. Please refer to Natural England's Standing Advice to assist in deciding what survey and mitigation measures would be appropriate for the development.

For clarification of any points in this letter, please contact Judith Weightman on 02080262317.

This letter concludes Natural England's Advice within the Quotation and Agreement dated 14th June 2017.

As the Discretionary Advice Service is a new service, we would appreciate your feedback to help shape this service. We have attached a feedback form to this letter and would welcome any comments you might have about our service.

☒ The advice provided in this letter has been through Natural England's Quality Assurance process

The advice provided within the Discretionary Advice Service is the professional advice of the Natural England adviser named below. It is the best advice that can be given based on the information provided so far. Its quality and detail is dependent upon the quality and depth of the information which has been provided. It does not constitute a statutory response or decision, which will be made by Natural England acting corporately in its role as statutory consultee to the competent authority after an application has been submitted. The advice given is therefore not binding in any way and is provided without prejudice to the consideration of any statutory consultation response or decision which may be made by Natural England in due course. The final judgement on any proposals by Natural England is reserved until an application is made and will be made on the information then available, including any modifications to the proposal made after receipt of discretionary advice. All pre-application advice is subject to review and revision in the light of changes in relevant considerations, including changes in relation to the facts, scientific knowledge/evidence, policy, guidance or law. Natural England will not accept any liability for the accuracy, adequacy or completeness of, nor will any express or implied warranty be given for, the advice. This exclusion does not extend to any fraudulent misrepresentation made by or on behalf of Natural England.

Yours sincerely

Judith Weightman
Somerset Levels & Moors Conservation Team

Cc commercialservices@naturalengland.org.uk

Annex 1
European Protected Species

A licence is required in order to carry out any works that involve certain activities such as capturing the animals, disturbance, or damaging or destroying their resting or breeding places. Note that damage or destruction of a breeding site or resting place is an absolute offence and unless the offences can be avoided (e.g. by timing the works appropriately), it should be licensed. In the first instance it is for the developer to decide whether a species licence will be needed. The developer may need to engage specialist advice in making this decision. A licence may be needed to carry out mitigation work as well as for impacts directly connected with a development. Further information can be found in Natural England's 'How to get a licence' publication.

If the application requires planning permission, it is for the local planning authority to consider whether the permission would offend against Article 12(1) of the Habitats Directive, and if so, whether the application would be likely to receive a licence. This should be based on the advice Natural England provides at formal consultation on the likely impacts on favourable conservation status and Natural England's guidance on how the three tests (no alternative solutions, imperative reasons of overriding public interest and maintenance of favourable conservation status) are applied when considering licence applications.

Natural England's pre-submission Screening Service can screen application drafts prior to formal submission, whether or not the relevant planning permission is already in place. Screening will help applicants by making an assessment of whether the draft application is likely to meet licensing requirements, and, if necessary, provide specific guidance on how to address any shortfalls. The advice should help developers and ecological consultants to better manage the risks or costs they may face in having to wait until the formal submission stage after planning permission is secured, or in responding to requests for further information following an initial formal application.

The service will be available for new applications, resubmissions or modifications – depending on customer requirements. More information can be found on Natural England's website.

Document Type:	**Supporting Information, Application for Permit, Bespoke Waste Operation for Non-hazardous waste physical treatment facility**
Description:	**Non-Technical Summary. NTS.WZ.001**
Site:	**Former airfield** **Land off A372 Westonzoyland** **ST 36201 34022**
Prepared by:	**Rebecca Bomers** **Towens of Weston Limited** **Plot 2 Warne Road** **Western-Super-Mare** **North Somerset** **BS23 3UU**
Issued to:	**Environment Agency**

Document Control

Author	**Date**	**Signature**
Rebecca Bomers	14/11/2018	
Authorised	**Date**	**Signature**
Nick Towens Director	14/11/2018	
Revision	**Date**	**Detail of Change**

Contents

Appendices

Non-Technical Summary

1.0 Introduction

This non-technical summary relates to an application to the Environment Agency (EA) for a bespoke waste operation permit to allow Towens of Weston Ltd to operate a Non-Hazardous physical treatment facility in the town of Westonzoyland in Somerset.

The proposed permitted area is located on land off of the A372 in Westonzoyland, which formed part of a disused airfield. The OS grid reference for the site is ST 36201 34022.

A site location plan is attached within Appendix A as figure B6/170306. This plan also illustrates the proposed permitted area, outlined in red.

It is proposed to import waste materials to be treated by way of crushing, screening or chipping, depending on waste type. The majority of waste arriving at the site will have passed through an existing waste transfer station, owned and operated by Towens Waste Management Ltd and therefore only good quality material will be entering the site.

Pre-application discussions have taken place with Chris Nutley (Environment Officer, West Waste team) of the Environment Agency and Judith Weightman (Land Management Advisor) Natural England. Pre-application reference is EPRFB3101UXA001.

TOW's registered office address is: Plot 2 Warne Road, Weston-Super-Mare, North Somerset, BS23 3UU.

The primary contact for the application is Rebecca Bomers, Environment Manager, TOW, rebecca.bomers@towens.co.uk (Tel 01934 422883).

2.0 Environmental Setting

2.1 Background.

The proposed development is located on a disused airfield, which has been used for storing wooden pallets since the 1990's.

The site consists of a mixture of concrete / asphalt man made ground (former runway) and grassed areas. The site in total covers an area of 1.214 hectares. A full site plan can be found in Appendix A.

2.2 Geology

The site is underlain by fluvial deposits of alluvium clay, on a bedrock of mudstone and halite stone. The majority of the site is not over an aquifer but the northern most part of the site is over a minor aquifer of soil class intermediate 1; this is not in a source protection zone.

2.3 Pollution history and industrial sites

There have been two significant pollution incidents recorded near the site. Incident number 967288 was recorded in 2012, located within 10 metres of the site, was caused by burning and was found to have a significant effect on land and air. Incident number 981865 was recorded in 2012, located 116 metres from the site, was caused by blood and offal and had a significant impact on land.

The nearest permitted waste site is located 142 metres away and is a special waste transfer station, operated by Silver Lining Industries Ltd. There are no historical or operational landfills within 500 metres of the site.

2.4 Sensitive Receptors

There are several sensitive receptors within influencing distance of the operational site, these are shown in Appendix A and are summarised as follows:

Local human population

A private dwelling consisting of a bungalow is located 300m to the North of the site.

- A residential caravan park is located 63m to the South-East.
- The main village of Westonzoyland is located approximately 850m away to the North-West
- An industrial estate is located to the North-East
- Areas around the site are used for recreation.
- A main road (A372) is located to the North of the site.

Environmentally sensitive areas

- Langmead and Weston SSSI and located 63m to the South of the site
- Pigditch Rhyne Network and Wildlife site is located 600m to the South
- Langmoor Wildlife site is 2km away to the North of the site
- Greylake RSPB reserve is 2km away to the North-East
- Kings Sedgemoor drain SSSI is 2km away
- Watercourses associated with the above.
- The nearest water abstraction is located 102 metres and is for a borehole fed reservoir, which is used for spray irrigation. Borehole locations can be seen in the EnviroCheck report, contained in Appendix G.
- There are no source protection zones

3.0 Proposed activities

3.1 Imported materials

Towens operate three waste transfer stations located in Weston Super Mare, Middlezoy and Clutton. The majority of waste will pass through and be sorted at one of these permitted facilities before being taken to site at Westonzoyland for further processing.

Towens will transport waste to the Westonzoyland site in either a 6-wheel tipper or an articulated lorry.

3.2 Storage on arrival

On arrival at site, waste will be deposited in the 'waste-in' bays as shown on plan SCR.SLP.WZ.2017. The size of the reception bays are 6 metres wide, 10 metres deep and 2.5 metres high, creating a maximum capacity of 150m3 per bay. The exception to this is for Top Soil, which will be taken straight into the top soil shed, also shown on the above mentioned plan.

3.3 Processing activities

With the exception of top soil screening to produce BS top soil, which will be carried out inside the shed, all other processing activities will be carried out in the processing area, shown on plan SCR.SLP.WZ.2017. This area has a sealed drainage system. The activities carried out in the processing area will consist of:

Shred green waste for onward processing

Chip wood for use as biofuel

Crush and grade aggregate to produce WRAP protocol aggregate

Grade road planings to produce WRAP protocol aggregate.

3.4 Storage pending removal

Whilst waiting removal from site, processed materials will be stored in the 'waste-out' bays as shown on plan SCR.SLP.WZ.2017. The dimensions of these bays are 12 metres wide, 5 metres deep and 2.5 metres high, creating a capacity of 150m3 per bay.

3.5 Total waste volumes

Each bay has a capacity of 150m3. There are two bays for each waste type, one for waste-in and one for waste-out. There are four waste types stored in these bays: Green waste, Wood, Aggregate and road planings. This gives a total site storage bay capacity of 1200m3.

The top soil shed has a storage capacity of 5000 tonnes. Using a conversion of 2.2 tonnes per m3, this allows for storage of 2272m3.

No waste will be stored in the processing area so the total quantity of materials on-site at any one time will not exceed 3500m3.

4.0 Consultation with Natural England

Natural England have been consulted with regards to this application and the full report by Natural England can be found in Appendix B. However, in summary:

They raised concerns that any high dust levels may affect the designated grasses and invertebrate in the adjacent Langmead and Weston SSSI, although they acknowledge that the prevailing wind is in the opposite direction.

Towens have installed a dust suppression system on-site and dust and particulates, if arising, will be managed in accordance with our Environmental Management System (Doc Ref SWP019) and Site Specific Dust Management Plan (Doc Ref: 41121_70496_Towens Dust Management Plan). Both of these Documents can be found in Appendix C.

They expressed concern that the adjacent SSSI may be a resting point for birds en-route to Kings Sedgemoor SSSI, which is an important site for wintering birds; the adjacent site is not however designated for birds. They have advised that anything above 3db above background noise levels may disturb birds.

Towens instructed Wardell-Armstrong to conduct a noise survey. The findings of this show that there may be a moderate impact from noise for the Langford

and Weston SSSI but no impact for any other sensitive receptor, including domestic dwellings; The report states that the moderate impact can be mitigated by a simple 6ft fence. The noise report can be found in Appendix D.

They suggested that the site may be inhabited by reptiles.

Towens instructed First Ecology to conduct a reptile survey. The findings of this show that no reptiles are on, or surrounding the site.

A general ecological impact assessment was conducted for the site and found that "*No protected or invasive, non-native species of plant were identified and the habitats within the site which will be impacted by the proposed development were not deemed to provide critical resources for any other protected or notable species of animal. In particular, species which are considered likely to be absent from the site or may be present but will not be adversely impacted by the proposed development are as follows:*

- *Great crested newts*
- *Badgers*
- *Bats*
- *Dormice*
- *Otthers*
- *Water voles*
- *White-clawed cray-fish."*

The ecological report can be found in Appendix E.

Another concern of NE, is that surface water run-off potentially containing polluting substances may find its way into the rhyne system of the SSSI.

A full drainage survey and report has been conducted and can be found in Appendix F. In summary, all areas where waste will be deposited will drain to a sealed system. Clean water will drain to a soakaway via a drainage ditch that contains check dams, which can be closed in the case of spills or where there is a risk of any contaminant entering the drainage system.

5.0 Drainage and flooding

A full drainage and flood assessment has been carried out by Harcombe Environmental Services. It concluded that 60% of the site (southern half) is in a Flood Zone 3 for flooding from rivers and Sea and has therefore a 0.5% (1 in 200) chance of being flooded. The remainder of the site has a 1% (1 in 100) chance of being flooded. However, the area is protected successfully by flood defence structures. In addition, there is no recorded evidence of the site being flooded.

For drainage, the only non-specified waste on site is wood and green waste. This is contained in a covered bay and has a grill drain at the mouth of the bay, draining to a sealed tank. The sealed tank is incorporated under the operational

area and takes all drainage from the operational area, which is secured by a sleeping policeman around the perimeter.

The remainder of the site will drain into an open channel drain located on the southern edge of the site, which has been fitted with check dams. The end of the drain terminates in a concrete bay, with a surface gully, transferring all collected water to subsurface pipes. Sub surface pipework will transfer to a single sub-surface soakaway tank, to the south-eastern corner of the site. A full copy of the drainage and flood risk assessment is contained in Appendix H.

6.0 Management & Control

6.1 Risk Assessment

A full risk assessment has been conducted, Doc Ref: Westonzoyland Risk Assessment., contained in Appendix I. The risk assessment has taken into consideration all possible hazards, pathways and receptors. The hazards' likelihood of occurring has been multiplied by the likely consequence severity to produce a risk score. The ratings range from 0 to 5, with 0 being no risk or consequence, and 5 being the highest level of the most likely consequence; Fig 1. Below illustrates this:

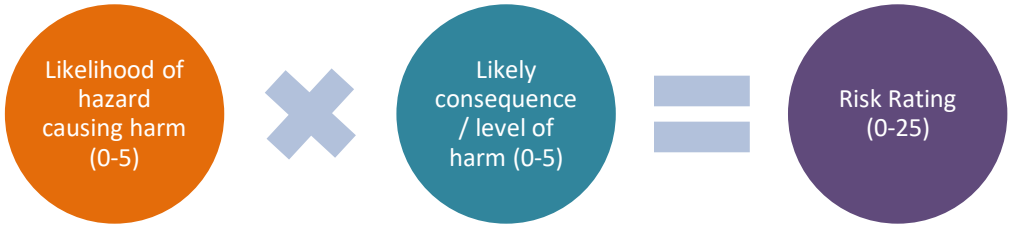


Figure 1. Risk score equation.

The risk ratings have then been further categorised into the following risk classifications and assigned a colour as shown in Table 1:

- Low –A risk rating of 0 – 2.
- Moderate – A risk rating of 3 - 5
- High – A risk rating of 6 – 10
- Very high – A risk rating of 12 – 25.

The risk ratings have been used to determine what, if any, risk management or mitigation measures need to be put into place. A summary of this is shown in Table 2.

Table 1. Risk score and associated colour coding.

		Consequence					
Likelihood		**0**	**1**	**2**	**3**	**4**	**5**
	0	0	0	0	0	0	0
	1	0	1	2	3	4	5
	2	0	2	4	6	8	10
	3	0	3	6	9	12	15
	4	0	4	8	12	16	20
	5	0	5	10	15	20	25

The environmental risk assessment has concluded that the application of appropriate control measures and operational procedures reduce the risks of potential impacts to nearby sensitive receptors to a low or moderate risk.

The initial assessments will be further developed and adapted (where necessary) by Towens of Weston through its internal audit schedule, which forms part of the EMS.

Table 2. Risk scores and associated minimum actions / mitigations required.

Risk Score at initial assessment	Mitigation / Risk Management needed	Residual Risk score	Further mitigation / risk management needed
0-2	No specific mitigation needed. Keep watch on the hazards and review on a regular basis.	N/A	N/A
3-5	Operator needs to be aware of the hazards and make regular inspections with actions recorded, for example, in the site diary. Consider reducing further if practically possible.	3-5	Continue observing and inspecting and recording findings and action. Review on a regular basis.
		0-2	No further action required. Risk is at an acceptable level. Operator to maintain awareness and continue to review on a regular basis.
6-10	This score must be reduced as soon as possible. Operations must be paused until risk is brought under control and risk score must be permanently reduced or the hazard eliminated.	6-10	The operations cannot continue.
		3-5	Begin observing and inspecting at regular intervals and record findings and actions. Review on a regular basis.
		0-2	No further action required. Risk is at an acceptable level. Operator to maintain awareness and continue to review on a regular basis.
12-25	This score must be reduced immediately and before any operations commence	12-25	The operations cannot take place.
		6-10	The operations cannot continue
		3-5	Begin observing and inspecting at regular intervals and record findings and actions. Review on a regular basis.
		0-2	No further action required. Risk is at an acceptable level. Operator to maintain awareness and continue to review on a regular basis.

4.0 Management System

Towens of Weston Ltd have an existing Environment Management System (EMS) in place. The standards and procedures in this EMS include the site at Westonzoyland. An outline of the EMS is included with this application and can be found in Appendix C as Doc Ref: SWP019. Relevant procedures, as referenced in the EMS and also referenced throughout the Risk Assessment are as follows:

- SWP001. Non-conformance and preventative action.
- SWP004. Spill kit stock check
- SWP005. Spill kit Instructions.
- SWP006. Spillage response.
- SWP008. Waste acceptance.
- SWP012. Waste rejection and tipping of non permitted wastes.
- SWP076. Mud and debris on the highway.
- SWP077. Document control
- SSF031. Westonzoyland site diary

Towens are currently working towards accreditation under ISO 14001.

Other documents referenced as part of the risk assessment and included with this application are:

- Dust management plan, ref: 41121_70496_Towens Dust Management Plan.
- Site plan SCR.SLP.WZ.2017
- Noise survey, ref: CA11269_Noise Assessment Repot-MD
- Transport assessment, ref: Towens Transport Statement.
- Flood and drainage survey, ref: HES Drainage and FRA.
- Fire Prevention Plan, ref: FPP.WZ.2018
- Ecological survey, ref: I260_Former Aerodrome_Ecological Appraisal_First Ecology

The environmental risk assessment has concluded that the application of appropriate control measures and operational procedures reduce the risks of potential impacts to nearby sensitive receptors to a low risk.

The initial assessments will be further developed and adapted (where necessary) by Towens of Weston through its internal audit schedule and continual improvement process, which forms part of the EMS.

Appendix A
Maps and plans

Appendix B
Natural England Report

Appendix C
Management system overview and associated documents

Appendix D
Noise survey

Appendix E
Ecological survey

Appendix F

Noise impact survey

Appendix G
Envirocheck report

Appendix H

Drainage and flood risk survey report

Appendix I

Risk Assessment

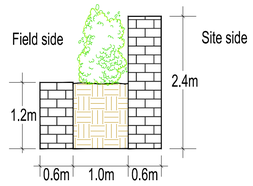
N

W E

S

Material storage in

Site boundary wall. 2.4 m high,
made from concrete Lego blocks.
Native hedgerow alongside wall,
with lower, 1.2m wall on field side.
(Refer to cross section for further info)



access

access

pond

springway lane

sleeping policeman bund 300mm high
surrounding working area.Full retention
surface water tank required

access

Site boundary wall. 3.0m high
made from concrete Lego blocks

Site boundary wall. 3.0m high
made from concrete Lego blocks

Material storage out

Open Channel Drain

Topsoil storage area

Middle Drove

63mm diameter fire hydrant

NOTATION:

1 - GREEN
2 - ROAD PLANINGS
3 - HARDCORE
4 - SOIL
5 - WOOD

COVERED AREAS

PLANT STORE WHEN NOT IN USE

MADE GROUND - CONCRETE

EMERGENCY ACCESS

0 10 20 30 40 50 METRES

SCALE 1:500

TOWENS GROUP

WESTON ZOYLAND

SITE PLAN

DWG No : SCR.WZ.2017

Standard Site Form 031. Westonzoyland site diary.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
		x	

Controlled Document

Permits:	EPR/FB3101UX	Exemptions	
Week Commencing			

TCM Visit	**Date**		**Time in**		**Time Out**		**Sign:**

Mon	Check highway for mud							AM		PM		
	Check dust on-site, perimeter and highway											
	Can any odour be detected in the air around the site perimeter?											
	Litter check done around the perimeter											
	Check for signs of pollution in the drainage ditch (colour, smell, dead fish)											
	Weather	Dry cold		Dry sunny		Windy		Wet				
Tues	Check highway for mud							AM		PM		
	Check dust on-site, perimeter and highway											
	Can any odour be detected in the air around the site perimeter?											
	Litter check done around the perimeter											
	Check for signs of pollution in the stream (colour, smell, dead fish)											
	Weather	Dry Cold		Dry Sunny		Windy		Wet				
Weds	Check highway for mud							AM		PM		
	Check dust on-site, perimeter and highway											
	Can any odour be detected in the air around the site perimeter?											
	Litter check done around the perimeter											
	Check for signs of pollution in the stream (colour, smell, dead fish)											
	Weather	Dry Cold		Dry Sunny		Windy		Wet				
Thurs	Check highway for mud							AM		PM		
	Check dust on-site, perimeter and highway											
	Can any odour be detected in the air around the site perimeter?											
	Litter check done around the perimeter											
	Check for signs of pollution in the stream (colour, smell, dead fish)											
	Weather	Dry Cold		Dry Sunny		Windy		Wet				
Fri	Check highway for mud							AM		PM		
	Check dust on-site, perimeter and highway											
	Can any odour be detected in the air around the site perimeter?											
	Litter check done around the perimeter											
	Check for signs of pollution in the stream (colour, smell, dead fish)											
	Weather	Dry Cold		Dry Sunny		Windy		Wet				

Other operations		
Checks made for pests	Date:	

Document title	Westonzoyland site diary	Revision Number	001
Document reference	SSF031	Date	21 September 2017
Prepared By	Rebecca Bomers	Sign Off	

Standard Site Form 031. Westonzoyland site diary.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
		x	

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Other information	
Include and give details for: • Rejected loads • Plant maintenance/breakdown • Tanks inspected / emptied • Emergencies • Problems with waste received • Environmental problems • Dust suppression used including type (bowser, mist, cannon etc) and time on / off. • If mud on road, give details of clean up e.g. Road sweeper. • Environment Agency inspections • Anything else occurring on-site that could have an environmental or operational impact	
Mon	
Tues	
Weds	
Thurs	
Fri	

Standard Work Procedure 001 Non-conformance and preventative action.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
	x	x	x

Controlled Document

1 Objective and Scope

Towens are operating ISO compliant management systems. As part of these management systems Towens are required to issue non-compliance reports (NCRs) in any of the following circumstances:

- A breach of permit has been found
- An environmental incident has occurred
- A breach of Duty of Care regs. has been found
- We are operating other than in accordance with our own procedures / work instructions or we find a work instruction is out of date.
- We receive any form of complaint
- A product we have produced doesn't meet the necessary specifications.
- A load gets rejected from a disposal / recovery operation.
- Any other finding, situation or occurrence that is contrary to the companies' rules or procedures.
- Any other finding, situation or occurrence that is in breach of UK or applicable legislation.

The purpose of recording non-conformances is to identify the issue and the root cause that led to the non-conformance and use this information to limit the chances of a future reoccurrence.

It is applicable to all staff.

2 Issuing a Non-Compliance Report

2.1 Generating the Non-compliance Report

There are three parts to generating a non-compliance:

1. Reporting to management
2. Generating a NCR number

Standard Work Procedure 001 Non-conformance and preventative action.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
	x	x	x

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3. Filling out a NCR form

2.2 Reporting to management

All staff are expected to report all non-conformances to their line manager. It is the line managers' responsibility to raise a non-conformance report and be responsible for investigating and closing down the report once identified actions have been completed. Or, if the non-conformance is outside of their area of work, they are responsible for handing it over to a suitable manager who can deal with it and agrees to do so.

2.3 Recording the non-conformance.

Each non-conformance must have a unique identifying number. A non-conformance log can be found on the K drive in the folder title 'Non-conformances'.

Click on the 'Live' tab at the bottom of the page and use the next available NCR number from the log; the log is listed in ascending numerical order.

The following information should be entered onto the register:

- Column A: unique NCR number
- Column B: The person generating the NCR.
- Column C: The person responsible for actioning the NCR.
- Column D: The system under which the NRC is being issue, ie quality (9001), environment (14001) or health and safety (18001) or any combination of these.
- Column E: Company reporting the NCR
- Column F: Person reporting the NCR
- Column G: Reason for Issue
- Column H: Details of issue
- Column I: Date the NCR was raised
- Column J: Corrective action to be taken or needed.
- Column K: Estimated completion date for remedial actions.

Standard Work Procedure 001 Non-conformance and preventative action.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
	x	x	x

Controlled Document

- Column L: Review date and updates. This is to be used if the remedial action is not simple and therefore takes a number of weeks/months to complete.
- Column M: Closure date. This is only to be filled in once all actions have been completed. The completed NCR will then transfer to the 'Old' tab.

Doc Ref: SS006 Non-conformance log

2.4 Completion of the non-conformance form

A blank non-conformance report (form STOF01) should then be completed. STOF01 is located on the K Drive within the standard forms / standard office form file.

In the Non Conformance file on the K drive create a new file and label it NCRXXX, where X is the NCR number applicable to your report.

Save the report and any associated findings or evidence in this file. If you have completed a paper form and/or have paper evidence or other papers related to your report, it must be scanned and saved electronically in the same way as detailed above.

3 Management and Director review of Non Compliance Reports

All NCRs are discussed monthly at the relevant management meetings and these discussions are recorded in the associated meetings minutes.

Standard Work Procedure 004. Spill Kit Stock Check

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
		x	x

Controlled Document

Spill Kit Stock Check

Quantity that should be in kit	Quantity actually in Kit	Quantity needed to be added	Item	Sizes/Volumes
1 Copy			Spill kit content – instructions for use (SWP005)	
1 Pair			Heavy duty neoprene gloves	
1 Pair			Safety goggles / glasses	
1 Pair			Disposable overalls	X Large
1			Dust / Mist mask	
1			Dustpan and brush	
1			Plastic scoop	
10			Plastic waste disposal bags	
1			Absorbent boom (long)	2 metres
2			Absorbent boom (short)	1.2 metres
60			Absorbent pads	
1 bag			Cellulose absorbent	10 kg
1			Drain cover	

I confirm that the spill kit has been stock checked against the approved kit requirements and that any missing items have been added. I have re-sealed the spill kit with the correct security tag.

Name ……..

Date ……...

Signature ……..

Standard Work Procedure 005. Spill kit instructions.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
		x	x

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SPILL KIT CONTENTS – INSTRUCTIONS FOR USE

BOOMS

Use booms to contain, absorb or divert spills from drains.

* Overlap boom ends to increase length

* Surround leaking containers or drums to prevent spill from spreading

* Use booms to absorb spilt liquid

* Divert the spill away from drains, stock or equipment to an area where the spill can be safely cleaned up.

* Protect drains by placing booms in front of or around the drain.

* If spill is on a slope where volume and velocity may be a factor, place booms at an angle of 45^0 to deflect the liquid to an areas where it can be safely contained and recovered.

PILLOWS

Use pillows to contain and absorb the spills

***** Use pillows to absorb spilt liquid

***** Placed behind booms to absorb seepage of contained liquid

***** Place pillows under dripping pipes or leaking valves.

***** Plug small drains or holes to prevent the spill spreading.

PADS

Use pads to absorb and clean up the spills

* Use pads to absorb spilt liquid

* Place pads behind booms to absorb seepage of contained liquid.

* Place pads under dripping pipes or leaking valves.

* Use pads to wipe down clothing, hands, floors etc.

GROUND AND FLOOR ABSORBENTS

Use to absorb spills on floors

* Spread the absorbent onto and in front of the spill. Work from the outside-in to prevent the spill from spreading.

* Work the absorbent into the spill with a broom or shovel.

* Clean up using shovel or duspan and brush.

DISPOSAL BAGS

For use in the clean-up stage

* Place used absorbents into disposal bag

* Only half fill the disposal bag, then tie off with a knot for transportation.

* Do not place partly used absorbents back into the spill kit.

PERSONAL SAFETY EOUIPMENT

Use for personal protection

* Dress in appropriate protective clothing when attending to a spill – If unsure, Check the COSHH assessment. As a minimum, gloves should always been worn and goggles and overalls if there is a risk of splashes.

Document title	Spill kit instructions	Revision Number	001
Document reference	SWP005	Date	20/06/2017
Prepared By	Rebecca Bomers	Sign Off	

Standard Work Procedure 006. Spillage response.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
		x	x

Controlled Document

Objective

To ensure we have fully stocked spill kits available at all times and that staff are trained in how to use them and are able to clean up all spillages efficiently and effectively in the shortest time possible.

Purpose and scope

To prevent / minimise harm to people and the environment.

Applicable to all staff.

Cleaning spillages

The following are general guidelines to be followed. Site specific guidance will be included with project specific method statements and site operational plans.

1. **Identify the source** of the materials and if it safe to do so, isolate the source to prevent further release.
2. Don **personnel protective equipment** as appropriate to the hazard. Refer to the COSHH Assessment.
3. **Contain the spill**. Loose spill control materials should be distributed over the entire spill area, working from the outside, circling to the inside. This reduces the chance of splash or spread of the spilled liquids. Refer to SWP005 for instructions on how to use the spill kit
4. **Protect the environment**; Drains, water courses or other environmentally sensitive features which may be affected. This may require the use of absorbent materials (loose granules, absorbent pads, booms, socks). If help is required, a list of fully trained spill response personnel can be found at the end of this procedure.
5. **Inform management**; management can then raise a non-conformance and request further clean-up if necessary.
6. If a significant release of contaminated materials into the environment has occurred contact **Environment Agency and/or the Emergency Services**. If external assistance is required to deal with the incident then immediately contact the Towens Directors and inform them of the actions being undertaken.

Standard Work Procedure 006. Spillage response.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
		x	x

Controlled Document

7. **Recovery**. When spilled materials have been absorbed, the materials are to be recovered. For small spillages this may require the use of spades and shovels and placement within a secure container. For larger spills mechanical excavation and stockpiling of the materials may be required.
8. All containers/stockpiles should be clearly labeled. All waste materials and used spill control equipment to be disposed of at a suitably permitted waste management facility.

Spill Kit Stock

Qty	Item	Sizes/Volumes	Notes
1 Copy	**Spill kit content – instructions for use (SWP005)**		
1 Pair	**Heavy duty neoprene gloves**		
1 Pair	**Safety goggles / glasses**		
1 Pair	**Disposable overalls**	**X Large**	
1	**Dust / Mist mask**		
1	**Dustpan and brush**		
1	**Plastic scoop**		**For spreading ot collecting absorbenht material**
10	**Plastic waste disposal bags**		
1	**Absorbent boom (long)**	**2 metres**	
2	**Absorbent boom (short)**	**1.2 metres**	
60	**Absorbent pads**		
1 bag	**Cellulose absorbent**	**10 kg**	
1	**Drain cover**		

Stock Check

Use form SWP004 to carry out a stock check.

All spill kits, should be fully stocked.
A security tag is to be placed on the spill kit once stocked.
If you break the tag, inform the site manager.

Standard Work Procedure 008. Waste Acceptance.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
	x	x	x

Controlled Document

1. Objectives

- To ensure only permitted waste types are accepted by clearly identifying the sources of the materials and characterization of the materials.
- To prevent harm to the environment.
- To keep staff and members of the public safe.
- To ensure treatment methods and disposal routes (where applicable) can be identified at the earliest stage.
- To ensure good quality feedstocks for the products produced from the waste materials.

2. Purpose and scope

To ensure staff involved in the acceptance of waste are aware of the above objectives and have the correct knowledge to be able to make effective decisions. Applicable to:

- Staff booking in waste
- Weighbridge operators who accept waste onto site
- Yard supervisors and operatives who monitor the tipping of waste
- Production operatives who crush, screen and grade waste.
- Production operatives responsible to stockpiling finished products.
- Yard manager whom supervise all of the above.
- All other Directors, Managers and Supervisors who have decision making responsibility for any of the above.

3. General

Waste enters the control of Towens of Weston and Towens Waste Management in a variety of ways:

- Arrival in a skip to Towens Waste Management Transfer stations
- Arrival by members of the public
- Arrival via Towens Haulage lorries
- Arrival via other haulage lorries

All waste entering a facility must be pre-accepted by a Technically Competent Manager before the waste is allowed to be tipped. This is to ensure that the waste meets the description that the producer has given it and to ensure the waste is allowed to be accepted onto site, in-line with the sites Environmental Permit.

Standard Work Procedure 008. Waste Acceptance.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
	x	x	x

Controlled Document

4. Pre-acceptance

Waste must be checked to ensure:

It meets the description given by the producer
It is allowed to be accepted onto site in-line with the sites Environmental Permit.
The waste has no odour
The waste is not a hot load
That all road planings described as non-hazardous are PAK sprayed
The correct Duty of care paperwork is in place

5. Duty of care

The producer of the waste is responsible for classifying and describing the waste.

All movement of waste must be accompanied by a Waste Transfer note or if the waste is hazardous it must be accompanied by a Consignment Note.

For non-hazardous waste, Waste transfer notes can either arrive with the waste or be provided by Towens. If provided by Towens, these must be provided once the waste is accepted but before the waste is tipped.

For Hazardous waste, all waste must arrive at site with an already filled out Consignment Note. Any hazardous waste arriving without a consignment note will be rejected, in-line with SWP012 Waste rejection and tipping of non permitted waste.For further information on consignment notes, refer to SWP057 Hazardous Waste consignment notes.

If a weighbridge is in place then all waste must be weighed before being tipped.
Where no weighbridge is in place, quantities will be given based on the container size i.e. An 8 wheeled tipper is assumed to be carrying 20000 tonnes.

6. Hazardous Waste

Hazardous waste is only permitted to be accepted at the Towens of Weston Site in Weston Super Mare. The wastes permitted are limited to Tar Bound road planings and Fuel contaminated soils.

In addition to the pre-acceptance for other wastes, all hazardous waste must be accompanied by a Waste Information Form (SSF001). And all information needs to be entered onto the waste enquiry sheet (SS011) – see Procedure SWP010 for further information on recording waste enquiries.

7. Tipping of waste

All tipping of waste must be visually monitored. This is to ensure that the waste meets the description given on the duty of care paperwork and to ensure the waste is tipped in the designated area / bay.

Non hazardous mixed waste can be tipped in the general tipping area for further sorting.

Non hazardous single waste streams can be tipped directly into the relevant bay.

Hazardous waste must be tipped in the relevant designated area / bay.

For smaller sites, such as recovery permits, where only clean soils are allowed, this can be easily managed by a technically competent person meeting the arrival of each waste type and staying present whilst the waste is tipped. For larger sites, the weighbridge operator must inform the yard staff of waste deliveries by means of radio communication.

8. Waste acceptance into aggregate stockfeed

By this stage the waste has already been described by the producer, visually checked by a technically competent person and has the correct duty of care paperwork attached to it.

Before waste is transferred to the stockfeed pile it is visually checked again both while being loaded and unloaded onto the stockfeed pile.

9. Non permitted waste.

A procedure (SWP012) has been established to effectively deal with any waste that is not permitted.
A procedure SWP063 has been established to effectively deal with any load that is hot.

10. Review

Standard Work Procedure 008. Waste Acceptance.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
	x	x	x

Controlled Document

This procedure should be reviewed annually or whenever there is a change to the acceptance criteria.

Standard Work Procedure 012. Waste rejection and tipping of non permitted waste.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
	x	x	x

Controlled Document

1. Objective

To ensure all staff are aware of the correct actions to take when confronted with waste that is not permitted to be accepted.

2. Purpose and Scope

- To ensure compliance with Environmental permits.
- To ensure compliance with Waste duty of care.
- To prevent contamination of existing waste / products / environment.
- To prevent emergencies such as spillages and / or fires.

3. Collection of the waste from the waste producer

- All drivers should be trained in waste acceptance and ensure the waste they are collecting matches the description on the duty of care paperwork.

- Should the waste be identified as not matching the paperwork then the driver must refuse to accept the waste. The driver must report the occurrence to their line manager immediately who will liaise with the customer direct.

4. On arrival at Towens' sites

4.1 Non hazardous waste

Should the material be identified as containing non-permitted waste prior to the load being tipped then the general rule is that the load will be rejected and directed back to the waste producer.

However, if the non-permitted waste can be removed from the load, the producer can remove it and secure it in their vehicle before the remaining load can be tipped.

4.2 *Hazardous waste*.

Standard Work Procedure 012. Waste rejection and tipping of non permitted waste.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
	x	x	x

Controlled Document

If hazardous waste is found amongst a load of non-hazardous waste then the entire load must be rejected.

Any hazardous waste arriving at the site without a consignment note must also be rejected and the following rules adhered to:

When you have an incomplete or incorrect consignment note

- Complete part E of the consignment note, enter the waste(s) you are rejecting and the reason.
- Keep one copy of the note.
- Give one copy to the carrier.
- Make copies of the note and send one to each of the consignor, producer and holder; these may be the same people.

When Hazardous wastes arrives without a consignment note

You must provide in writing:

- The reason you rejected the waste.
- The description of classification of the waste, if known.
- The names of the poroducer, holder, consignor and carrier.
- A consignment note code you assign in the format REJECT/XXXXX where 'XXXXX' is any five letters or numbers you use to give the load a unique code.

You must then:

- Keep a copy of the explanation in your records
- Give one copy to the carrier
- Send a copy to each of the producer, holder and consignor as soon as possible
- Use this information for your returns to the Environment Agency and to the waste producer or holder.

You may commit an offence if you create a consignment note when the waste arrives at site as this is classed as a false and invalid note.

Standard Work Procedure 012. Waste rejection and tipping of non permitted waste.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
	x	x	x

Controlled Document

Accepting the rejected load

You can only accept a hazardous waste with a missing, incomplete or inaccurate consignment note if:

- You have first rejected it and explained your reasons for doing so
- The producer or holder asks you to accept the rejected waste
- Your permit or exemption authorizes you to do so

You are not obliged to accept it

- If you want to accept it, the producer or holder must first:
- Produce a new consignment note that is complete and correct
- Address the reasons why the waste was rejected.

5. Paperwork

In addition to rejecting the consignment note, as detailed above, the following form must be filled out for all rejected loads:

Doc Ref: STOF32 Waste rejection Information

6. At the tipping area

- If the material has been tipped and subsequently found not to be compliant and the producer / carrier is still on site, then the producer / carrier must take the waste back.
- If the material has been tipped and subsequently found not to be compliant and the producer / carrier has left the site, an effort must be made to contact the producer to request them to take the waste back. In the meantime, the waste must be quarantined.
- If the material has been tipped and subsequently found not to be compliant and there is no way of contacting the producer / carrier then the waste must be quarantined and a suitable recovery or disposal route found for it.

Standard Work Procedure 012. Waste rejection and tipping of non permitted waste.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
	x	x	x

Controlled Document

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7. **Quarantining waste**.

Any waste found on a site that is not permitted to be accepted at that site must be quarantined.

The quarantine area must be clearly shown on the site plan and a sign must be in place adjacent to the waste to identify the quarantine area.

Non permitted waste must leave the site as soon as possible and should not be kept for more than two weeks, unless other factors such as laboratory analysis takes longer than two weeks, in which case the waste must be moved as soon as is practicably possible.

8. Non conformance

For any of the scenarios mentioned above, a non-conformance must be raised in line with procedure SWP001 Issue of Non conformance.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
		x	

Controlled Document

Towens of Weston Ltd

Towens Waste Management Ltd

Environmental Management System Manual

1. Scope

This manual forms the basis of the Environment Management System (EMS) for all sites under the control of Towens Waste Management Ltd (TWM) and Towens of Weston Ltd (TOW).

The overarching aim of this management system is to ensure that the business can fulfil its purpose, stay legally compliant, and maintain social responsibility by way of meeting the objectives set by our Environmental Policy and therefore enhancing and protecting the environment and we aim to continually improve year on year.

Towens Environmental Policy is endorsed by the board of directors and signed by the companies' Managing Director. It is communicated to all employees and is publicly available to interested parties.

The EMS is integrated within all business systems to ensure all processes are controlled and carried out as planned, throughout the year, in accordance with environmental protocol.

The main purpose of both TOW and TWM is to provide a waste management service to customers, which consists of the collection, treatment, storage, transfer and disposal of waste. Our waste management activities can be summarised as the following:

- Delivering skips and then taking them away once the customer has filled it with waste. These skips will then go back to one of our sites for sorting, treatment or transfer onwards for further recycling, treatment or disposal.
- Customers bring their waste direct to the transfer station in Weston where it is sorted, treated or transferred onwards for further recycling, treatment or disposal.
- We provide haulage to our own or another site.
- We treat hazardous road planings containing coal tar.
- We treat fuel contaminated soils with bio-remediation.

In addition to waste management, we also provide:

- Vehicle maintenance in our own purpose built garage.
- Groundworks and earthworks
- Haulage

The nature of these activities, any ancillary aspects and services we provide, including any influence we have over suppliers, customers and peers, is also included within this management system. Our ability to exercise control and / or influence over customers and interested parties varies but environmental consideration will be prioritised wherever practicable.

TOW and TWM EMS arrangements are consistent with the requirements of the internationally recognised standard for environment management systems, ISO14001.

Doc Ref: Towens Group Environmental Policy

2. Normative references

This is not applicable to the standard

3. Terms and Definitions

Audit

An audit is an evidence gathering process. Evidence is used to evaluate how well audit criteria are being met. Audits must be objective, impartial, and independent, and the audit process must be both systematic and documented. Audits can be either internal or external.

Internal audits are referred to as first-party audits while external audits can be either second or third party. They can also be combined audits (when two or more management systems of different disciplines are audited together at the same time).

Audit evidence includes records, factual statements, and other verifiable information that is related to the audit criteria being used. Audit criteria

may be thought of as a reference point and include policies, requirements, and other forms of documented information. They are compared against audit evidence to determine how well they are being met. Audit evidence is used to determine how well policies are being implemented and how well requirements are being followed.

Communication

Communication is the imparting or exchanging of information by speaking, writing, or using some other form medium.

Competence

Competence means being able to apply knowledge and skill to achieve intended results. Being competent means having the knowledge and skill that you need and knowing how to apply it. It means that you're qualified to do the job**.**

Compliance Obligation

A compliance obligation is a requirement. There are two kinds of compliance obligations: mandatory compliance obligations and voluntary compliance obligations. Mandatory compliance obligations include laws and regulations, while voluntary compliance obligations include contractual commitments, community and industry standards, ethical codes of conduct, and good governance guidelines. A voluntary obligation becomes mandatory once you decide to comply with it.

Conformity

To conform means to meet a requirement (or a compliance obligation). Since there are many kinds of requirements, conformity can take many forms. You can conform (or comply) with mandatory requirements like laws and regulations or with voluntary requirements such as contracts, agreements, codes, and standards.

Context

An organization's context is its business environment. It includes all of the issues, factors, and conditions that could influence or be influenced by an organization's environmental management system**.**

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
		x	

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Continual Improvement

In the context of an EMS standard, continual improvement is a set of recurring activities that organizations use to enhance their environmental performance. Environmental performance is enhanced whenever the environmental aspects of activities, processes, products, services, and systems are controlled and whenever adverse environmental impacts are reduced and beneficial environmental impacts are produced.

Corrective action

Corrective actions are steps that are taken to prevent recurrence by eliminating the cause or causes of an existing nonconformity. The corrective actions process tries to make sure that existing nonconformities don't happen again.

Documented Information

The terms documented information refers to information that must be controlled and maintained and its supporting medium. Documented information can be in any format and on any medium and can come from any source.

Documented information includes information about the environmental management system and related processes. It also includes all the information that organisations need to operate and all the information that they use to document the results that they achieve (aka records).

Effectiveness

Effectiveness refers to the degree to which a planned effect is achieved. Planned activities are effective if these activities are actually carried out and planned results are effective if these results are actually achieved.

Environment

The term environment refers to organisations' natural and human surroundings. An organisations environment extends from within the organisation itself to the global system and includes air, water, land, flora and fauna (including people), and natural resources of all kinds.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
		x	

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Environmental condition

Environmental conditions are states or characteristics of the environment at a particular point in time.

Environmental Impact

An environmental impact is a change to the environment that is caused either partly or entirely by one or more environmental aspects. An environmental aspect can have either a direct and decisive impact on the environment or contribute only partially or indirectly to a larger environmental change. In addition, it can have either a beneficial environmental impact or an adverse environmental impact.

Environment Management System

An environmental management system (EMS) is a set of interrelated or interacting elements that organisations use to implement their environmental policy, to achieve their environmental objectives, to meet their environmental compliance obligations, to manage their environmental aspects, and to address their environmental risks and opportunities.

These elements include structures, programs, procedures, processes, practices, plans, rules, roles, regulations, responsibilities, relationships, contracts, agreements, documents, records, methods, tools, techniques, technologies, and resources.

Environmental Objective

An environmental objective is an environmental result than an organisation intends to achieve. The organisations objectives should be based on or derived from its environmental policy and must be consistent with this policy.

Environmental Policy

A policy is a commitment, directions, or intention and is formally stated by the top management or an organisation. An environmental policy should make a commitment to protect the environment, to meet all relevant compliance obligations, and to enhance environmental performance.

Indicator

An indicator is a measurable representation. It is used to indicate or measure the status or condition of an operation or an activity. In the context of this standard,

indicators can be used to quantify and evaluate environmental performance. They can be used to measure how much success you've had and how much progress you've made relative to the environmental objectives you wish to achieve and the environmental policy you wish to implement. Indicators can also be used to monitor trends and to support decision making.

Interested party

In general, an interested party is any person, group, or organisation who can affect, be affected by, or believe that they are affected by a decision or activity. In the context of this standard, an interested party is anyone who can affect, be affected by, or believe that they are affected by the environmental performance of an organisation.

Issues

Issues can be external or internal, positive or negative and include environmental conditions that either affect or are affected by the organisation.

Leadership

Requirements specific to top management to establish a clear vision, share that vision with others, provide information and knowledge to realise that vision, coordinate and balance the resources to be able to achieve the vision and balancing the conflicting interests of all members and stakeholders. A leader steps up in a time of crisis or a difficult situation.

Life cycle

In the context of this standard, the term life cycle refers to the consecutive and interlinked stages of a product system from the acquisition of raw materials to end-of-life disposal. The life cycle of a product system includes all associated activities, products and services and may include procured goods and services as well as end-of-life treatment, decommissioning and disposal.

Measurement

Measurement is a process that is used to determine a value.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
		x	

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Monitoring

To monitor means to determine the status of an activity, process or system at different stages or at different times. In order to determine status, you may need to supervise and to continually observe and check the activity, process, or system that is being monitored.

Nonconformity

Nonconformity refers to the “non-fulfilment of a requirement”. When an organisation fails to meet a requirement, a nonconformity exists. Since there are many kinds of requirements, nonconformities can take many forms e.g. fail to conform (or fail to comply) with mandatory requirements like laws and regulation, or with voluntary requirements such as contracts, agreements, codes, standards or processes.

Objective

An objective is a result you intend to achieve. Objectives can be strategic, tactical, or operational and can apply to an organisation as a whole or to a system, process, project, product, or service. Objectives may also be referred to as targets, aims, goals, or intended outcomes.

Organisation

An organisation can be a single person or a group that achieves its objectives by using its own functions, responsibilities, authorities, and relationships. It can e a company, corporation, enterprise, firm, partnership, charity, or institution and can be either incorporated or unincorporated and be either privately or publicly owned. It can also be an operating unit that is art of a larger entity.

Outsource

When an organisation makes an arrangement with an outside organisation to perform part of a function or process, it is referred to as outsourcing. To outsource means to ask an external organisation to perform part of a function or process normally done in-house. While the outsourced organisation is beyond the scope of our EMS, the outsourced process or function itself may fall within the scope.

Performance

According to ISO, the term performance refers to a measureable result. It refers to the measurable results that activities, processes, products, services, systems and

organisations are able to achieve. So whenever processes, products, services, systems, or organisations perform well it means that acceptable results are being achieved.

Prevention of pollution

To prevent pollution means to avoid, reduce, or control the creation, emission, or discharge of contaminants or waste materials. Pollution must be prevented in order to reduce adverse environmental impacts. A variety of methods, techniques, practices, process, products and services can be used to prevent pollution. These include the reduction or elimination of pollution at the source; the efficient use of resources, materials and energy; the reuse, recovery, reclamation, and recycling of resources; the redesign of processes, products, and services; and the substitution of one type of energy source or substance for another cleaner energy source or substance.

Procedure

A procedure is a way of carrying out a process or an activity. Procedures may or may not be documented.

Process

A process is a set of activities that are interrelated or that interact with one another. They transform inputs into outputs. Processes are interconnected because the output from one process often becomes the input for another process.

Requirement

A requirement is a need, expectation, or obligation. It can be stated or implies by an organisation, its customers, or other interested parties. A specified requirement is one that has been stated (in a document for example), whereas an implied requirement is a need, expectation or obligation that is common practice or customary.

Risk

Risk is the effect of uncertainty and an effect is a positive or negative deviation from what is expected.

Risk is often expressed as a combination of two factors: probability and consequences. It asks two questions: what is the probability that a potential event

will occur in the future? And what consequences would this event produce or what impact would it have if it occurred?

Risks and Opportunities

Risks are potential adverse effects (or threats) and opportunities are potential beneficial effects.

Top Management

The term Top Management normally refers to the people at the top of an organisation. It refers to the people who provide resources and delegate authority and who coordinate, direct, and control organisations. However, if the scope of a management system covers only part of an organisation, then the term Top Management refers, instead, to the people who direct and control that part of the organisation.

4. Context of the Organisation

Towens have identified and understand the factors and parties that can affect, either positively or negatively, the EMS. This includes understanding the internal and external issues and environmental conditions that could influence our EMS and the results that it intends to achieve.

4.1 Understanding the organisation and its context

Both TOW and TWM recognise that a plethora of things can have the ability to affect not only our companies' purpose but also our capability to achieve the intended outcomes of our environmental management system. We also recognise that that we can affect them. The factors we have taken into consideration include:

Environmental Conditions
Climate
Air quality
Water quality
Land use

Existing contamination
Natural resource availability
Biodiversity

External conditions
Cultural
Social
Political
Legal
Regulatory
Financial
Technological
Economic
Natural and competitive circumstances

We have also considered whether all of the above could be International, National, Regional or Local

Internal Conditions
Activities
Products
Services
Strategic direction
Culture
Capabilities (people, knowledge, processes, systems).

Doc Ref: SS007 Aspects and Impacts register
Doc Ref: SS010 Legal register

4.2 Understanding the needs and expectation of interested parties

We recognise that interested parties form part of the context in which our organisations operate. We understand that in order to form a good working relationship with them, we must first identify who they are and understand what their expectations are of us and what we can expect from them. We

have considered both internal and external interested parties and have considered the following:

- Employees
- Contractors
- Clients / Customers
- Suppliers
- Regulators
- Shareholders
- Neighbours

We have then considered their expectations and interested by relationship, which can be summarised as either:

- By responsibility
- By Influence
- By proximity
- By dependency
- By authority

Doc Ref: SS008 Determining Interested Parties
Doc Ref: STOF06 Supplier 14001 questionnaire

4.3 Determining the scope of the environmental management system.

The overarching aim of this management system is to ensure that the business can fulfil its purpose, stay legally compliant, and maintain social responsibility by way of meeting the targets sets by our Environmental Policy and therefore enhancing and protecting the environment.

Towens Environmental Policy is endorsed by the board of directors and signed by the companies' Managing Director. It is communicated to all employees and is publicly available to interested parties.

The main purpose of both TOW and TWM is to provide a waste management service to customers, which consists of the collection, treatment, storage,

transfer and disposal of waste. Our waste management activities can be summarised as the following:

- Delivering skips and then taking them away once the customer has filled it with waste. These skips will then go back to one of our sites for sorting, treatment or transfer onwards for further recycling, treatment or disposal.
- Customers bring their waste direct to the transfer station in Weston where it is sorted, treated or transferred onwards for further recycling, treatment or disposal.
- We provide haulage.
- We treat hazardous road planings containing coal tar.
- We treat fuel contaminated soils with bio-remediation.

In addition to waste management we also provide:

- Vehicle maintenance in our own purpose built garage.
- Groundworks and earthworks
- Haulage

The nature of these activities, any ancillary aspects and services we provide, including any influence we have over suppliers, customers and peers, is also included within this management system. Our ability to exercise control and / or influence over customers and interested parties varies but environmental consideration will be prioritised wherever practicable.

TOW and TWM EMS arrangements are consistent with the requirements of the internationally recognised standard for environment management systems, ISO14001.

4.4 Environmental Management System

Towens will implement, maintain and continually improve a management system in order to achieve its intended outcomes, including enhancement of environmental performance, compliance and improvement.

The management system will be an integral part of the business and will drive more meaningful analysis of key business processes and critical aspects of the processes. In practical terms, this means that it will require Towens to more fully analyse its processes and ensure that there is a good understanding of how they interact with each other and not operate as isolated procedures with overlap

5 Leadership

The top management at Towens, whom direct and control the organisation, will demonstrate leadership and commitment by integrating this management system into business processes. Towens management have committed to having a greater involvement in the management system and will establish an Environmental Policy as part of this commitment. They have also commitment to continual improvement of the management system and will ensure that the EMS is communicated, maintained and understood by all parties.

5.1 Leadership and commitment.

Top management shall demonstrate leadership and commitment by:

- Taking accountability for the effectiveness of the EMS. This is through the approval of objectives, the policy and identifying significant aspects in decision making
- Ensuring the environmental policy and objectives are established and are compatible with the strategic direction of the organisation.
- Ensuring integration of the EMS into the companies' business processes.
- Ensure appropriate resource is available.
- Communicating the importance of an effective EMS and conforming to the requirements.
- Directing and supporting people who contribute to the effectiveness of the EMS.
- Promoting continual improvement through management programs, objectives and innovations.

- Supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility i.e. Maintenance, Site Managers, Transport managers.

5.2 Environmental Policy

Directors shall establish, implement and maintain an environmental policy that, within the defined scope of the EMS, discusses context (nature, scale and environmental impacts, products, services); provides a framework for setting objectives; includes a commitment to protect the environment; includes a commitment to fulfil compliance obligations and includes a commitment to continually improve.

Doc Ref: Towens Environmental Policy

5.3 Organisational roles, responsibilities and authorities

Top management shall ensure that the responsibilities and authorities of relevant roles are assigned and communicated within the organisations.

The Environmental Manager is responsible for overseeing the EMS and reporting performance to the Directors. This can be done through monthly reports, periodic meetings and / or other communications.

The site environmental organisation is represented by a flow diagram that clearly shows lines of departmental responsibility and managerial hierarchy

Doc Ref: DP002 Organisational chart.

Doc ref: SSF002 Key staff and contacts

6 Planning

The following sections outline some of the main responsibilities with regards to the running of the EMS.

6.1 Actions to address risks and opportunities

6.1.1 General

Towens will establish, implement and maintain processes in order to:

- Mitigate the impacts that were highlighted on the Aspects and Impacts Register.
- Be able to take full advantage of all opportunities identified, and mitigate against all risks identified on the Risks and Opportunities register.
- Consider potential emergency situations, which could arise and constitute risk.
- Consider all compliance obligations, maintain compliance and keep up to date on all relevant legislation and compliance obligations.
- Maintain a high calibre of staff by addressing training needs.
- Continually improve environmental performance.

Doc Ref: SS009 Risks and opportunities register

6.1.2 Environmental Aspects

An environmental aspect is “An element of an organisations activities, products or services that can interact with the environment”. An Environmental Impact is “Changes to the environment, either adverse or beneficial, that result wholly or partially from environmental aspects”.

Towens identify all significant aspects and associated environmental aspects so that we can see where control or improvement is needed and to be able to set priorities for management action. Our policy, environmental objectives, training, communications, operational controls and monitoring processes are all developed with knowledge based on our significant environmental aspects.

Understanding activities, products and services

Towens acknowledge that all activities, products and services have some impact on the environment, which can occur at any or all stages of the lifecycle i.e. from raw material acquisition and distribution, to end use and disposal.

Determining environmental aspects

A procedure has been established to identify all the environmental aspects associated with the activities, products and services that can be influenced or controlled by Towens Group of companies. In addition to those environmental aspects that we can control directly, we have also considered aspects that we can influence e.g. Those related to products and services we use and those related to products and services we provide.

This procedure is to ensure we consider our ability to influence with regards to our compliance obligations as well as local and companywide policies. It also ensures we consider the implications on our own environmental aspects by giving consideration to the following:

- Purchasing of products
- Activities carried out by external providers
- Design of products and services
- Materials, goods or services supplied
- Transport, use, reuse or recycling of products placed on the market.

Doc Ref: SWP013 Identifying and assessing aspects and impacts.

Doc Ref: DP001 WSM Site plan.

Doc Ref: DP003 Drainage plan Middlezoy

Determining environmental Impacts

All aspects that have, or can have, significant environmental impacts are determined through a risk assessment process and these are considered in the process of determining objectives and targets. Significant risks are

documented on the form along with whether the aspect has a site, lifecycle perspective or interested party connotation.

When considering environmental impacts, Towens shall take into account changes or modified activities, services and products and ad normal conditions / reasonably foreseeable emergency situations.

Doc Ref:

SS007 Aspects and Impacts register
SS008 Significant aspect action plan
SWP013Assessing Aspects and Impacts
SWP008 Waste acceptance
SWP012 Waste rejection and tipping of non permitted waste
SWP010 Waste enquiry recording
SWP055 Emergency highway works
SWP057 Hazardous waste consignment notes

6.1.3 Compliance obligations

When determining our compliance obligations we have given consideration to regulatory compliance, which is mandatory, but also to other voluntary agreements:
New scoring system - EA – Above and beyond
Any vehicle / fleet ones?

Towens believe that it is only by considering the above, that we can fully understand our compliance obligations.

Towens have established a procedure to identify all environmental legislation, regulatory and other requirements (Including those of interested parties) that are applicable to the companies. This procedure ensures that information is kept up-to-date and that we can accurately monitor our compliance

Doc Ref: SWP011 Environmental Planning
Doc Ref: SWP014 Environmental objectives and planning to achieve them.

6.1.4 Planning action

6.2 Environmental objectives and planning to achieve them.

6.2.1 Environmental Objectives

In order to meet the policy requirement of continual improvement, Towens have established environmental objectives at each relevant function and level within the organisations. Objectives take into consideration the following:

- Significant environmental aspects
- Technological options
- Financial, operational and business requirements
- Views of interested parties
- Top management goals

The objectives are consistent with the environmental policy, measureable (when applicable), monitored, communicated to all members of staff and updated as appropriate.

6.2.2 Planning actions to achieve environmental objectives

The Significant Aspect Action Plan and management meetings have been set up to ensure that the objectives are achieved. The program includes:

- Roles and responsibilities for achieving each objective.
- The timescales for their completion.
- The process involved.
- Resources needed.
- Setting priorities.
- Evaluating results.
-

7. Support

7.1 Resources

Top management at Towens will make a commitment to provide the resources needed for the establishment, implementation, maintenance and continual improvement of the environmental management system – covering all aspects of people and infrastructure. This includes maintaining organisational knowledge to ensure the organisation understands internal and external knowledge needs as well as providing a commitment to ensure management of resources, including effective succession planning for personnel.

Directors

Will ensure the relevant resources are available to establish, implement, maintain and continually improve the EMS and appoint an Environment Manager to manage the system. The Directors will review the EMS on a periodic basis to ensure its continuing suitability, adequacy and effectiveness.

Environment Manager

The Environment Manger will:

- Ensure that the EMS requirements are established, implemented and maintained.
- Report in the performance of the EMS to the Directors for review and as a basis for improvement to the EMS
- Communicate the requirements and performance of the system to all employees

Audit Team

Towens will train and retain a group of about eight people to carry out internal audits. Between the members of this team, all sections of the EMS will be audited annually.

All employees

All employees have responsibility for environment management. Key environmental responsibilities are outlined during employee induction training. Individuals directly involved with running and / or recording data relevant to the EMS are listed in the Responsibility column of the Measuring and Monitoring Table, see section 9.

7.2 Competence

All employees will receive basic environmental awareness training as part of their induction. The induction training will cover:

- Environmental Policy
- Conformance to environmental procedures and work instructions.
- The employees role and responsibility in the operation of the EMS.
- Emergency plan.

Doc Ref: SSF003 Site induction form

Employees will receive further training, as required, to ensure they are competent in any additional roles or extra duties they are required to be involved in / responsible for.

Towens have a training matrix which shows all staff, the relevant training requirements, dates training took place and expiry dates of any training received.

Doc Ref: SS004 Training Matrix

7.3 Awareness

By adhering to the communication procedure, Towens will ensure that all personnel are aware of the environmental policy, significant aspects and impacts of relevance to their activities, how they contribute to the environmental objectives, environmental performance and compliance obligations, and the implications of failures in compliance.

7.31 Awareness of contractors

Towens will ensure that persons doing work under the organisations control are aware of:

- The environmental policy
- Significant environmental aspects related to their work
- Their contribution to the effectiveness of the EMS
- The implications of not conforming to the site rules.

To achieve this, a Contractor Rules document is signed by all contractors.

Doc Ref: STOF37 Contractor Rules

7.4 Communication

7.4.1 General

Towens will establish, implement and maintain processes needed for internal and external communication relevant to the EMS. The communication procedure sets out what will be communicated, when to communicate, to whom we communicate and how to communicate. It also details, where necessary, how the communications should be documented, recorded and kept.

Doc Ref: SWP015 Communication procedure

7.5 Documented Information

7.5.1 General

Management system hierarchy is as follows:

1. Environmental Policy
2. Environment manual
3. Environmental procedures / work instructions
4. Environmental documented information

The manual contains references to all related environmental documentation, including the environmental procedures and work instructions that are required by the standard and what is deemed necessary by the company for effectiveness of the EMS.

7.5.2 Creating, Updating and controlling documents

Towens have established procedures for controlling documents required for the operation of the EMS. This procedure will ensure that documents are:

- Identified and described
- Reviewed and updated as necessary are re-approved.
- The relevant versions of documents are available at locations where activities are performed.
- Obsolete documents are removed from all points of issue and use, or otherwise controlled to prevent unintended use.
- Formatted appropriately.
- Documented information is retained for the relevant time periods.

Doc Ref: SWP077 Document control

8. Operation

8.1 Operational planning and control

Towens recognise that having operational control is essential to control and mitigate our environmental impact. To achieve this, we have constructed processes and whilst doing so, we have considered the following features:

- Existing internal processes and what others are needed.
- Our environmental objectives
- Life cycle of a product
- Available technology
- Personnel competency and training requirements
- Monitoring, measuring and analysis.
- The amount of documented information needed to support our aims and objectives
- Legal and compliance requirements
- Internal and external parameters, interested parties and processes.
- Opportunities for improvement

Doc ref: SWP054 Registering a waste exemption
Doc ref: SWP072 General dust control
Doc ref: SWP073 Third party site waste management plans
Doc ref: SSF025 Template Waste Management Plan
Doc ref: SSF026 Warne Road combines site diary
Doc Ref: SSF027 Clutton site diary
Doc Ref: SSF029 Middlezoy site diary
Doc Ref: SSF030 Huntworth site diary
Doc Ref: STOF15 Treatment and sampler record bioremediation
Doc Ref: STOF18 Liability acceptance AWCCT
Doc Ref: STOF20 Non-commercial waste customer record

The standard requires that external and outsourced processes must be defined and controlled and so when planning to control this, we have considered:

- Resources, knowledge and training/competence.
- The ability of the provider to meet the EMS objectives.
- The potential effect of the product or service on environmental aspects
- How control is shared between the parties.
- How control is achieved through the procurement process

Doc Ref SWP016 Supplier performance monitoring
Doc Ref SWP003 Supplier assessment
Doc Ref SS013 Supplier and contractor list
Doc Ref SWP006 Spillage procedure
Doc Ref EP002 Fire prevention plan Warne Road
Doc Ref EP004 Fire prevention plan Middlezoy
Doc Ref EP007 Fire prevention plan Westonzoyland
Doc Ref EP008 Fore prevention plan Clutton
Doc Ref HSP076 COSHH

8.2 Emergency preparedness and response

Towens have a procedure for responding to accident and emergencies situations. This will help prevent and mitigate any negative environmental impacts associated with them. Potential emergency situations may be identified using our Non-conformance Preventative Action Procedure and this will lead to the updating of the Emergency plan.

Doc Ref: EP003 Warne Road Emergency plan
Doc Ref EP005 Middlezoy Emergency Plan
Doc Ref EP007 Westonzoyland Emergency Plan
Doc Ref EP009 Clutton Emergency Plan

9. Performance evaluation

9.1 Monitoring, measuring, analysis and evaluation

9.1.1 General

Towens are dedicated to ensuring that the EMS is effective. This includes a commitment to regularly monitor, measure and analyse results in order to continually improve.

9.1.2 Evaluation of compliance

A procedure has been established to monitor and measure key characteristics of Towens operations that have a significant impact on the environment.

We have determined what needs to be measured, the methods used and the criteria to measure against. We ensure that only calibrated equipment is used and that performance is appropriately communicated both internally and externally, especially with reference to compliance obligations.

Doc Ref: SWP066 Monitoring and measuring procedure
Doc Ref: SS012 Monitoring and measuring table
Doc ref: SWP067 Effluent monitoring
Doc ref: SWP076 Mud and debris on the highway

9.2 Internal audits

9.2.1 General

The EMS and associated procedures will be audited on a sufficient frequency to ensure the system confirms to the ISO standard and has been properly implemented and maintained.

9.2.2 Internal audit programme

As well as auditing all aspects of the EMS, the audit plan also includes regular auditing of legal compliance, with a particular emphasis on Environment Permits, regulated by the Environment Agency. An audit programme is in place which states the frequency, methods, responsibilities and reporting of its audits. Ad-hoc audits are also carried out and are recorded on an ad-hoc inspection sheet.

Doc Ref: SS005 Internal audit plan
Doc Ref: STOF22 Audit report form
Doc Ref: SSF007 Ad-hoc inspection form
Doc Ref: STOF33 WSM Transfer station audit for permit compliance
Doc Ref: STOF34 WSM Treatment yard audit for permit compliance
Doc Ref: STOF35 Clutton audit for permit compliance
Doc Ref: STOF36 Middlezoy audit for permit compliance

9.3 Management Review

The EMS will be reviewed by Directors on an annual basis to ensure it continues to be suitable, adequate and effective. This process will include reviewing the companys' Environmental Policy, as well as ensuring the EMS meets the requirements of the policy and is at the standard as laid down in ISO14001:2015. The review will be used to assess resources to ensure we have enough resource in place to achieve our aims and objectives.

Doc Ref: SWP021 Director review

10. Improvement

10.1 General

Towens will determine opportunities for improvement and implement necessary actions to achieve intended outcomes of the EMS.

10.2 Nonconformity and Corrective Action

A procedure has been established to ensure that any environmental non-conformance shall be investigated and recorded. For each incident of non-conformance, corrective and/or preventative actions shall be undertaken and will be appropriate to the magnitude of the problem and commensurate with any actual or potential impact encountered.

Doc Ref: SWP001 Non-conformance and preventative action procedure.

10.3 Continual Improvement

Towens will continuously improve the suitability, adequacy and effectiveness of the EMS to continually improve the system and improve environmental performance. This is achieved through:

- Setting objectives and annual targets
- Measuring and monitoring, including regular auditing
- Recording findings and acting on non-conformances
- Maintaining and updating knowledge and competencies
- Monthly environment meetings

Doc Ref: STOF04 Environment Monthly Management Review

Standard Work Procedure 076. Mud and debris on the highway.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
		x	

Controlled Document

1. Purpose

Deposits on the highway are considered a road safety hazard for highway users – in particular mud is considered to be a danger to users of the highway because it may cause loss of control and skidding and lead to accidents.

It can cause a nuisance to neighbours by creating a mess, which can travel into their properties and is unsightly.

Mud and debris can also block road gullies leading to flooding and an increased chance of depositing suspended solids into a watercourse, which is harmful to aquatic flora and fauna.

Towens aim to prevent all of the above.

2. Objective and Scope

A public highway includes footways, footpaths and adjacent verges, bridleways as well as the road itself. Towens have this procedure in place to keep highways free of mud and debris to:

- Ensure compliance with Highways, Health and Safety and Environmental Legislations.
- Prevent causing a nuisance to neighbours.
- Maintain company reputation.
- Protect people and the environment.

All site users and vehicle drivers are responsible for keeping the highway free of mud and debris.

Standard Work Procedure 076. Mud and debris on the highway.

Relevant Management Systems	Quality 9001	Environmental 14001	Health & Safety 18001
		x	

Controlled Document

3. Monitoring

Mud and debris should be prevented from escaping from a permitted site onto a highway; this is a legal requirement under the Highways Act and also a condition of the permit regulated by the Environment Agency.

Roads leaving a permitted site should be checked for mud and debris twice per day and recorded in the site diary.

4. Mud or debris on a highway

If mud or debris is noticed on the highway, the road needs to be cleaned immediately. Towens have their own fleet of road sweepers and these can be used to clean the highway.

If a vehicle should deposit a large amount of mud or debris on a highway, away from a permitted site, the driver should contact their manager for further advice, or if the mud or debris poses a significant risk to other road users, the police need be informed by dialling 999; if safe to do so, cordon off this area of road until the area is cleared.

Standard Work Procedure 077 for Document Control

Relevance	Quality 9001	Environmental 14001	Health & Safety 18001
	x	x	x

Controlled Document

1 Objective

The purpose of this procedure is to define the activities required to ensure all documents and data are approved by authorised personnel, regularly reviewed and that each document used is the most up-to-date version. It is also used to ensure all Towens documents use the same formats and styles to aid with document uniformity.

2 Application and Scope

The scope of this process encompasses all documentation utilised by Towens including documents of external origin that affect:
The Quality of our products
The Environment
Health and Safety of Staff, Visitors and Contractors

Document definition: Where the term 'Document' is used in any Management System, it should be taken to mean 'Any information where an unauthorised change could cause a problem'.

Any document that forms part of a management system, needs to be controlled to prevent any unauthorised changes.

3 Requirements

This procedure applies to all Management System documentation and is to be followed by all personnel where appropriate. While the company Directors are responsible for signing all policies and procedures, managers of each department need to approve documents that relate to their departments.

4 Process

4.1 General

All documents and data are reviewed and approved by authorised personnel prior to each issue. Each department issues and maintains its own documents.

Relevance	Quality 9001	Environmental 14001	Health & Safety 18001
	x	x	x

Controlled Document

Current revisions of appropriate documents are available at locations where they are used; Towens prefer to store documentation on their IT systems but where access to the IT system is restricted, paper copies of documents will be provided and a record of locations will be documented to ensure the most up-to-date version is available. Documents controlled by this procedure include but are not limited to:

- Quality Management System
- Environment Management System
- Factory Production Control Manual
- Health and Safety Management System
- Work procedures
- Safe Systems of Work
- All documents used externally
- Any document directly related to any of the above

5. Document sign-off procedure

5.1 Creating new documents

Each department is responsible for writing their own procedures and must adhere to the following steps:

1. When creating a new document, ensure there is not a document in place already by referring to the document index.
2. If no document currently exists, a new document may be created.
3. When writing a procedure, each procedure must have a unique identifiable document number and use a set format for the Header and Footer, in-line with Procedure 081 for Word documents and Procedure 082 for Excel documents. The exception to this is letter templates, though these must still be assigned a document number, prefixed with ‘LTR’ and added to the letter section of the document register.
4. The preferred font for all Towens documents is Arial in font size 12.
5. Once a document has been created, the details must be entered on the document index.

Relevance	Quality 9001	Environmental 14001	Health & Safety 18001
	x	x	x

Controlled Document

6. Every procedure needs to be signed off by a Director. An up-to-date organisational structure can be found on Procedure 080, Towens Organisational Chart.
7. The department manager is responsible for identifying all locations where the procedure is needed to be kept.
8. Place a copy of the new procedure in each location it is required and add these locations to the document index.

   Doc Ref: SS001 Document index

5.2 Updating procedures

Each department is responsible for updating their own procedures and must adhere to the following steps:

1. Look on the document index to identify all locations where the procedure document is currently stored and retract all copies whilst the updating of the document takes place.
2. Update the procedure
3. Every procedure needs to be signed off by a Director. An up-to-date organisational structure can be found on procedure 080, Towens Organisational Chart.
4. If the procedure is required in paper format in more than one location, each document for each location needs to be signed off by a Director.
5. Once updated, amend the footer of the document to include:

- Your name in the 'Prepared by' box
- The current revision number
- The current date

6. Update the details on the document index to include:

- Current revision number
- Current date
- Review date (Max one year from procedure issued date)
- Amend locations, if applicable

7. Put an updated copy in all locations where it is needed.

Relevance	Quality 9001	Environmental 14001	Health & Safety 18001
	x	x	x

Controlled Document

8. Add details of changes to 'Track changes' document, located in the Document Control folder on the K: Drive.
9. Put a copy of the old procedure in the Archive folder, located within the Document Control folder and title the document by using the following format: DD/MM/YY Change number. The 'Change number' is provided on the 'Track Changes' spreadsheet.

   Doc Ref: SS003 Track changes

6. Using the latest versions

It is important to only use the most up-to-date version of documents. To ensure this happens, the following must be adhered to.

- Do not store blank copies of forms, spreadsheets, lists or procedures anywhere other than the official listed locations.
- When beginning a task or starting a new piece of work, ensure you are adhering to the latest versions of procedures / templates etc. by only using those stored in the relevant named files e.g. Standard Working Procedures, Standard Forms, Standard Spreadsheets, Standard Diagrams that can be found in the K: Drive of the Towens IT system.
- Do not delete data from a previously used template and then re-save as a new document.
- Check the version number of the document you are using is the most up-to-date version by cross-referencing it to the document index.

7. Review

This document needs to be reviewed annually.

Springway Industrial Estate,
Westonzoyland

Transport Statement

Proposed construction of a Materials Re-processing Facility

7 February 2018

For and on behalf of
Towens of Weston Ltd;

Project Ref: 2017/386

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Report Issued	8 December 2017
Final Report Issued	7 February 2018
Prepared By	Paul Lacey BSc CEng DipTE MICE FCIHT
Office	Taunton
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Contents

Figures

Appendix

1 Introduction

1.1 LvW Highways Ltd has been commissioned by Towens of Weston Ltd to prepare a Transport Statement (TS) to support a planning application at Springway Lane, Westonzoyland.

1.2 The application seeks permission for the construction and operation of a Materials Re-processing Facility and ancillary development (part retrospective) where materials will be treated, stored for short periods and then transported for re-use. The operations are expected to handle no more than 50,000 tonnes of Commercial & Industrial waste per annum.

1.3 This report sets out to examine the transport issues related to the pre-application advice provided by the case officer.

1.4 LvW Highways Ltd, as independent transport planning consultants, have prepared this Transport Statement providing what we consider is a fair and unbiased appraisal of the situation before and after construction of the new developments.

2 Existing Conditions

Site Location and Surrounding Area

Site

2.1 The site is located as shown in **Figure 1** below to the east of Westonzoyland and to the south of the A372. It is adjacent to the Springway Lane Industrial Estate within the Westonzoyland Airfield.

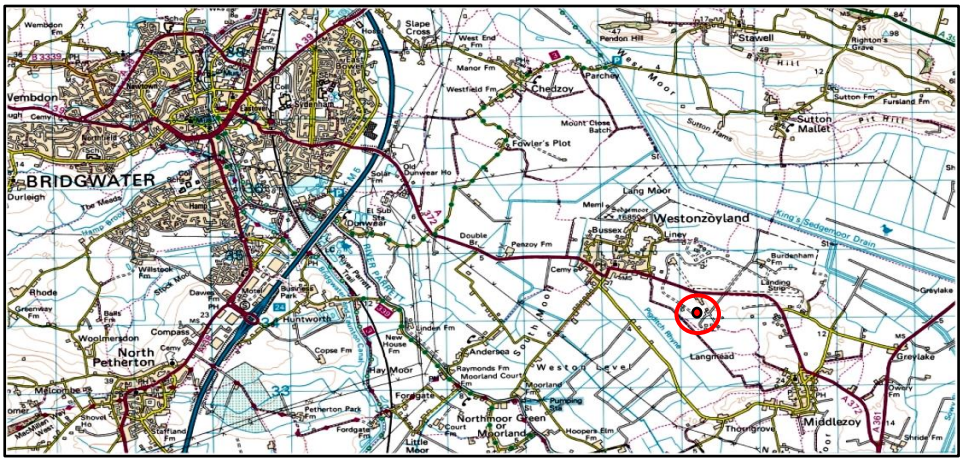

Figure 1 **Location to East of Westonzoyland**

2.2 Access to the site will be provided along a dedicated track which follows the line of a previous runway and will connect directly to the A372. **Figure 2** below indicates the access track and the development site bordered in red.

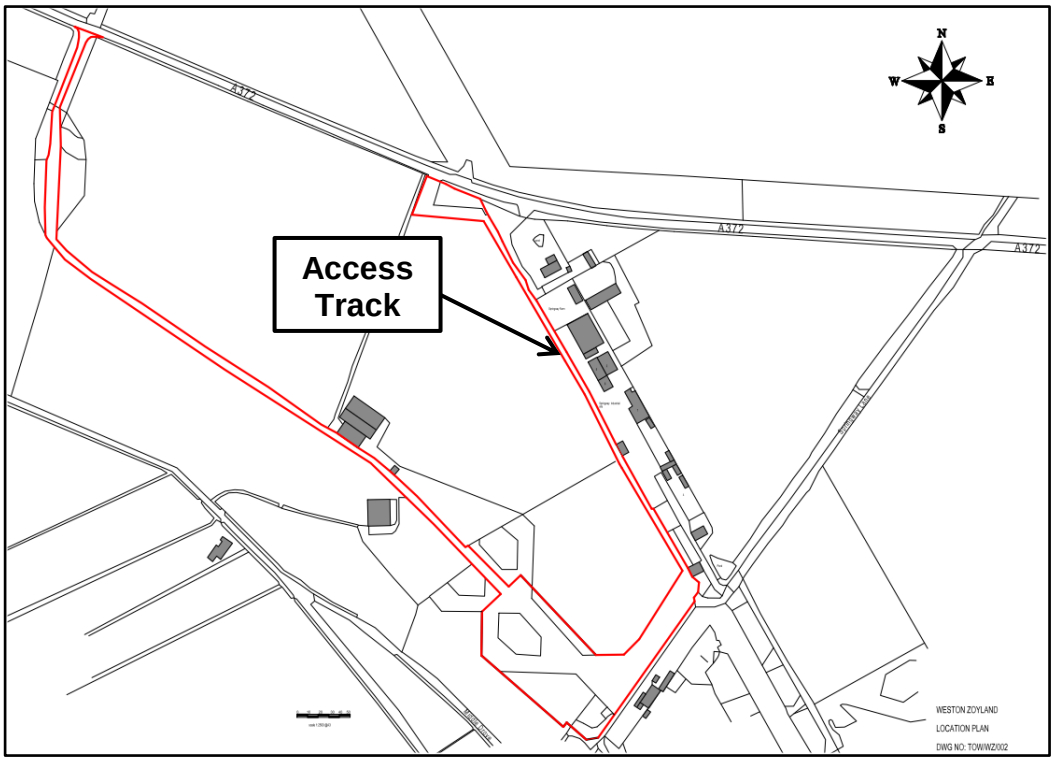

Figure 2 **Development Site and Access Track**

2.3 The track shown on the west side of the plan would only be used as an emergency access and would only be used very infrequently.

Strategic and Local Highway Network

2.4 The site is well located in terms of access to the strategic highway network with the development access directly connecting to the A372 which provides access to Bridgwater via Westonzoyland village. The road follows a zigzag route through the village of Westonzoyland with two right angled bends which can be seen on **Figure 1**

2.5 The A372 is a single carriageway which travels over the Somerset Levels before rising on a bridge over the M5 motorway. A dual carriageway connection named Parkway allows a convenient connection to the A38 Bath Road and then connection via Puriton Hill to Junction 23 north of Bridgwater. Junction 23 is 13km from the site.

2.6 In order to give an impression of the local roads surrounding the site a number of photographs are shown below starting from a point just to the east of the proposed access on the A372.

1 Looking west on A372 just to east of new access

The A372 is a high standard single carriageway with a speed limit of 60mph. The marker posts are indicating a slight right hand bend prior to the new access. As with all roads in the area the road is level.

2 Looking west on A372 with new access located after the second marker post

The carriageway ahead is straight on the approach to Westonzoyland village. An existing farm entrance on the left (after the second marker post) will be utilised for the new access.

3 Looking east from the proposed access

Clear visibility is available for at least 215m with main road traffic having good visibility of vehicles turning in or out of the access.

4 Looking into existing farm access

The entrance would be modified to allow two heavy goods vehicles to pass one another. Immediately on entry there is a large concrete area, remaining from one of the runways, which gives ample opportunity for vehicles to pass one another prior to entering a dedicated single track access road to the site.

5 Looking west from the proposed access

Clear visibility is available for at least 215m with main road traffic having good visibility of vehicles turning in or out of the access.

6 Looking west at first sharp bend in the village of Westonzoyland

The A372 is 8.0m wide on the bend which is sufficient for HGVs to pass light vehicles.

7 Looking west at second sharp bend adjacent to Village Shop

The A372 is 9.0m wide on the bend which is sufficient for HGVs to pass light vehicles.

8 Looking west on A372 between Westonzoyland and Bridgwater

The A372 remains level with minimal bends and is a high standard single carriageway.

9 Looking north on Parkway in Bridgwater

This is a straight urban dual carriageway with the majority subject to a 30mph speed limit. A central section (as shown) is subject to a 20mph limit. As two lanes are available there is minimal conflict with parked vehicles.

10 Looking to left at Parkway/Bath Road junction

Visibility is well in excess of the 43m required for this 30mph T junction.

11 Looking to right at Parkway/Bath Road junction

Visibility is well in excess of the 43m required for this 30mph T junction.

From this point vehicles would travel along Bath Road to the signal junction with Puriton Hill and then join the M5 at Junction 23.

3 Present Traffic Flows

3.1 Information has been supplied by Towens of Weston Ltd describing the present operation of the business as follows:

1 The present business operates out of three sites. The largest is at Weston Super Mare representing about 70% of the tonnage, the second at Middlezoy at about 20% and the third at Clutton with 10%.

2 Recycling of materials takes place at Weston Super Mare producing hard core, green waste which is sent for composting, wood chip for use in biomass boilers, and top soil. With limited capacity at WSM the intention is to transfer some of the recycled materials to the new site at Westonzoyland.

3 Vehicles presently travelling between Middlezoy and WSM would then travel a much shorter distance to the new site at Westonzoyland. At the present time a two-way flow of approximately 8 lorry movements per day takes place between Middlezoy and WSM.

4 The recycling business operates with 8 wheel 20 tonne capacity vehicles being used to transport aggregate and topsoil and articulated 30 tonne capacity vehicles for the wood chip and green waste.

5 The Westonzoyland site was previously used for the storage of wooden pallets and other miscellaneous materials and there is no data available on the number of vehicle movements to the site.

3.2 In relation to traffic flows along the A372 data is available from an Automatic Traffic Count Site which is located just to the west of the Village Shop in Westonzoyland. This has been complimented by an am peak traffic survey that was carried out on 31 October 2017 at the junction next to the Village Shop. These are described below:

3.3 Based on counts carried out as part of the national collection of traffic data by the DfT information has been extracted for Count Point 27031 which is located on the A372 as shown on **Figure 3** below. This has been used to determine past traffic growth:

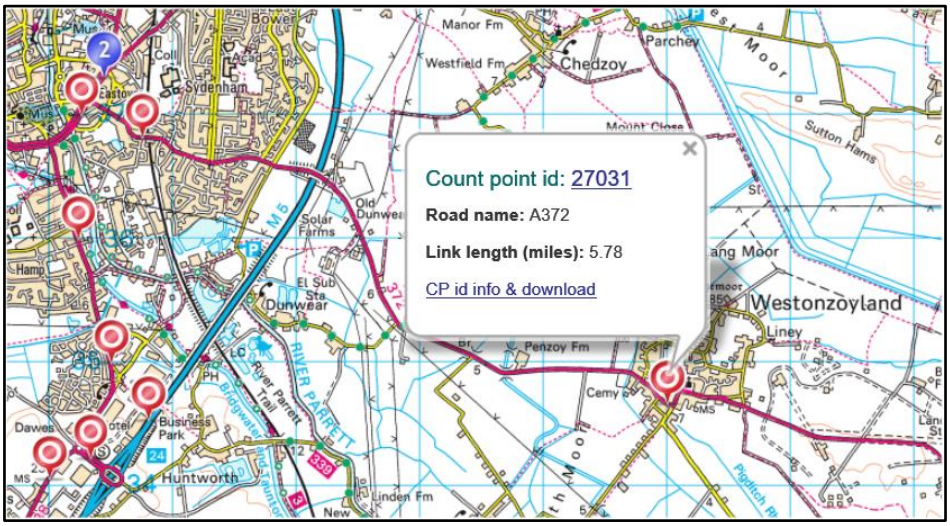

Figure 3 Location of Count Point 27031 on A372

3.4 Average 24 hour flows based on a 7 day week have been converted to average weekday 24 hour flows as shown in **Figure 4** below. The data for the period 2005 to 2016 shows the effects of the recession with flows falling and now slightly rising. In 2016 the slight rise has resulted in a 24 hour flow of 7850 vehicles two-way. This flow is essentially the same as the situation in 2005.

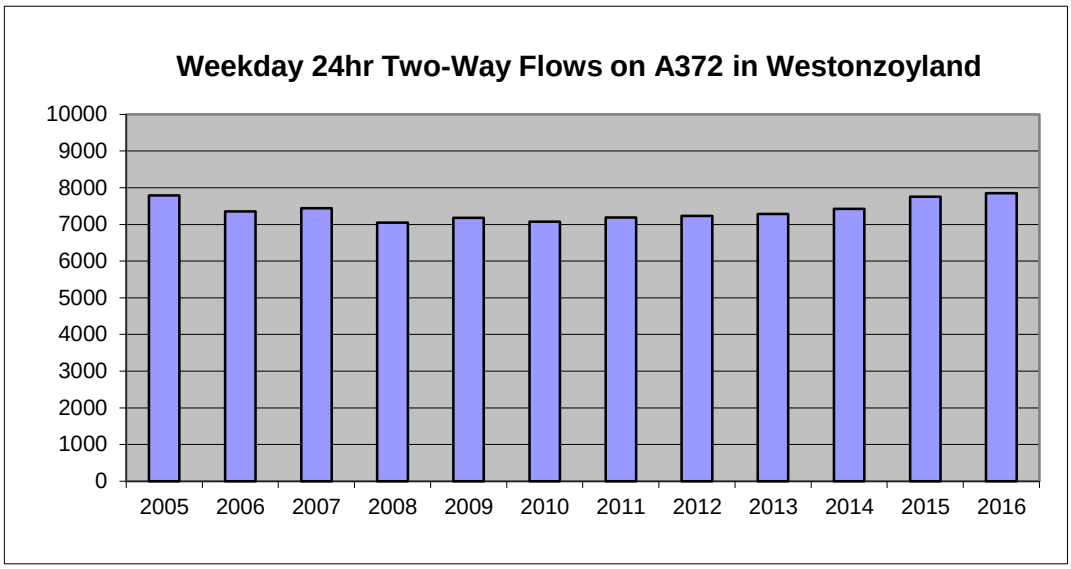

Figure 4 Weekday 24 hour traffic flow on A372 in Westonzoyland

3.5 The traffic count undertaken on 31 Oct 2017 provides am peak flows at the same location as the ATC site and provides greater detail of the total vehicle movements and the existing volume of heavy goods vehicles.

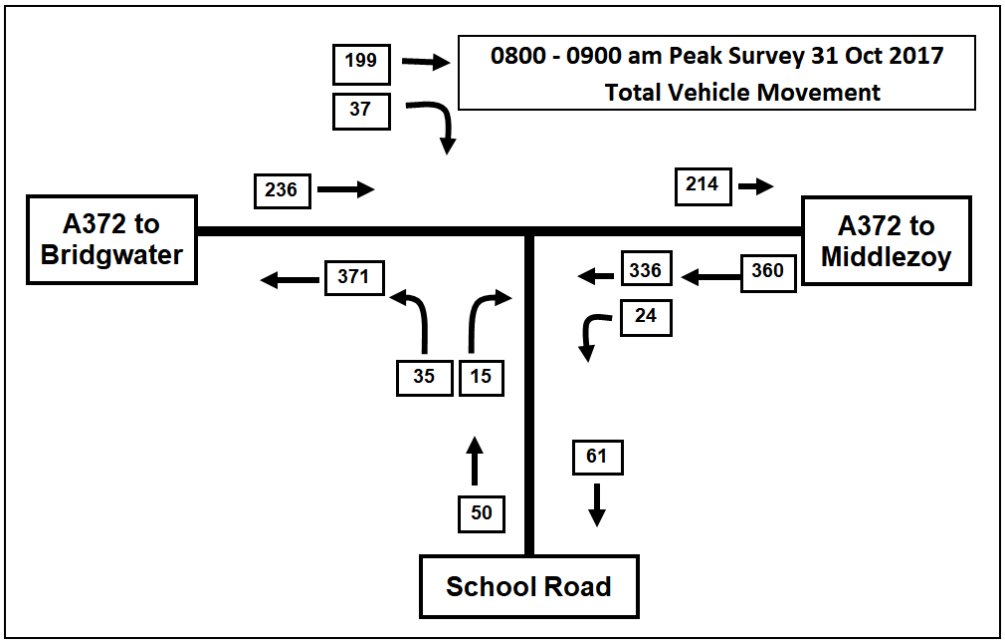

Figure 5 Am Peak Vehicle Count 31 Oct 2017

3.6 This diagrams indicates a two-way flow to the west of the junction of 607 vehicles which is in the same location as the ATC site and based on the 2016 data represents about 7.7% of daily flows. To the east of the junction two-way flows are 574 vehicles.

3.7 A similar diagram is shown in **Figure 6** showing the existing HGV movements counted on 31 October 2017.

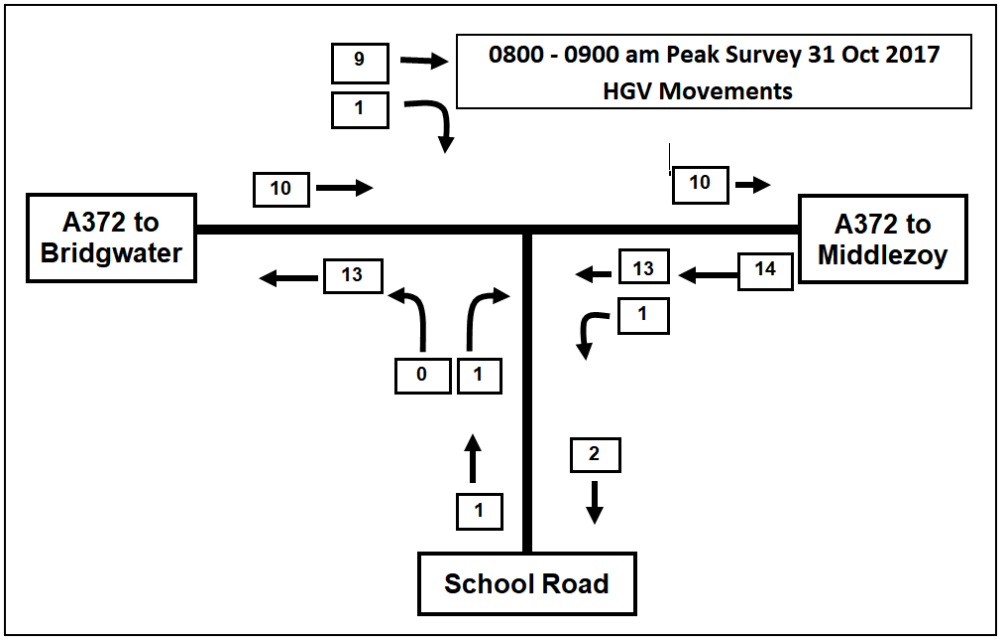

Figure 6 **Am Peak HGV Count 31 Oct 2017**

3.8 **Figure 6** indicates that HGV flows are approximately 3.8% of total flows to the west of the junction and 4.2% to the east.

3.9 The final analysis has used standard traffic profiles for different types of road such as rural and urban to predict the likely flows that will occur hour by hour through the day. This has used data from the October traffic count and the ATC data. The results are shown in **Figure 7** below:

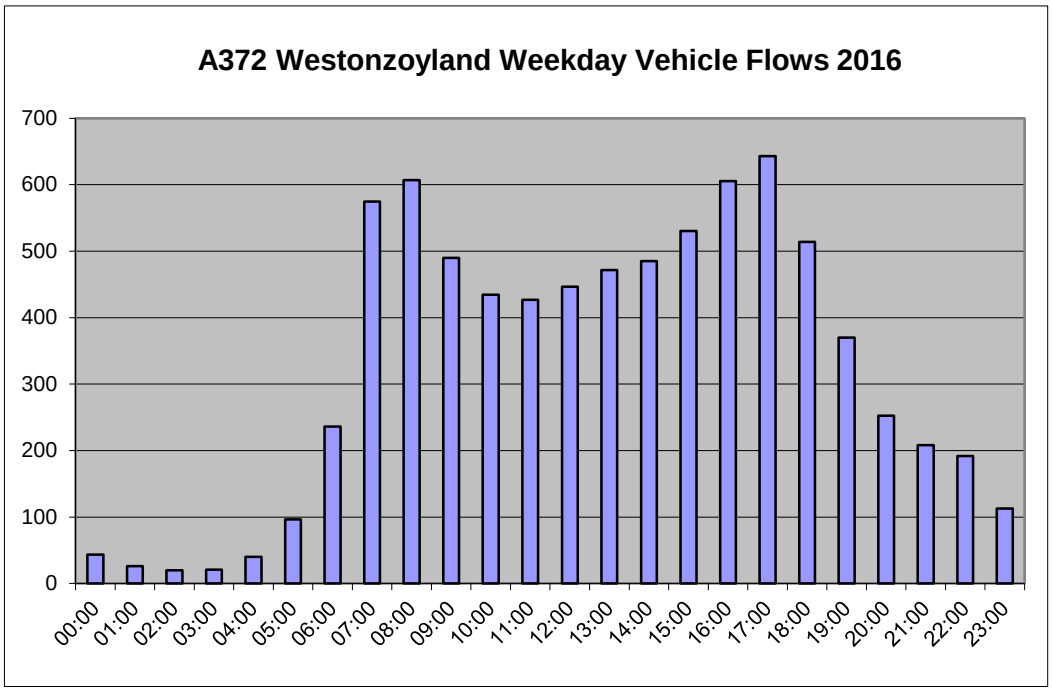

Figure 7 **Weekday hourly two-way traffic flow on A372 in Westonzoyland**

4 Development Proposals and Impact

Description of proposed development

4.1 The development proposal entails construction of a storage facility for different types of recycled materials. These would be contained in storage bins as shown in the Site Plan in **Figure 8**.

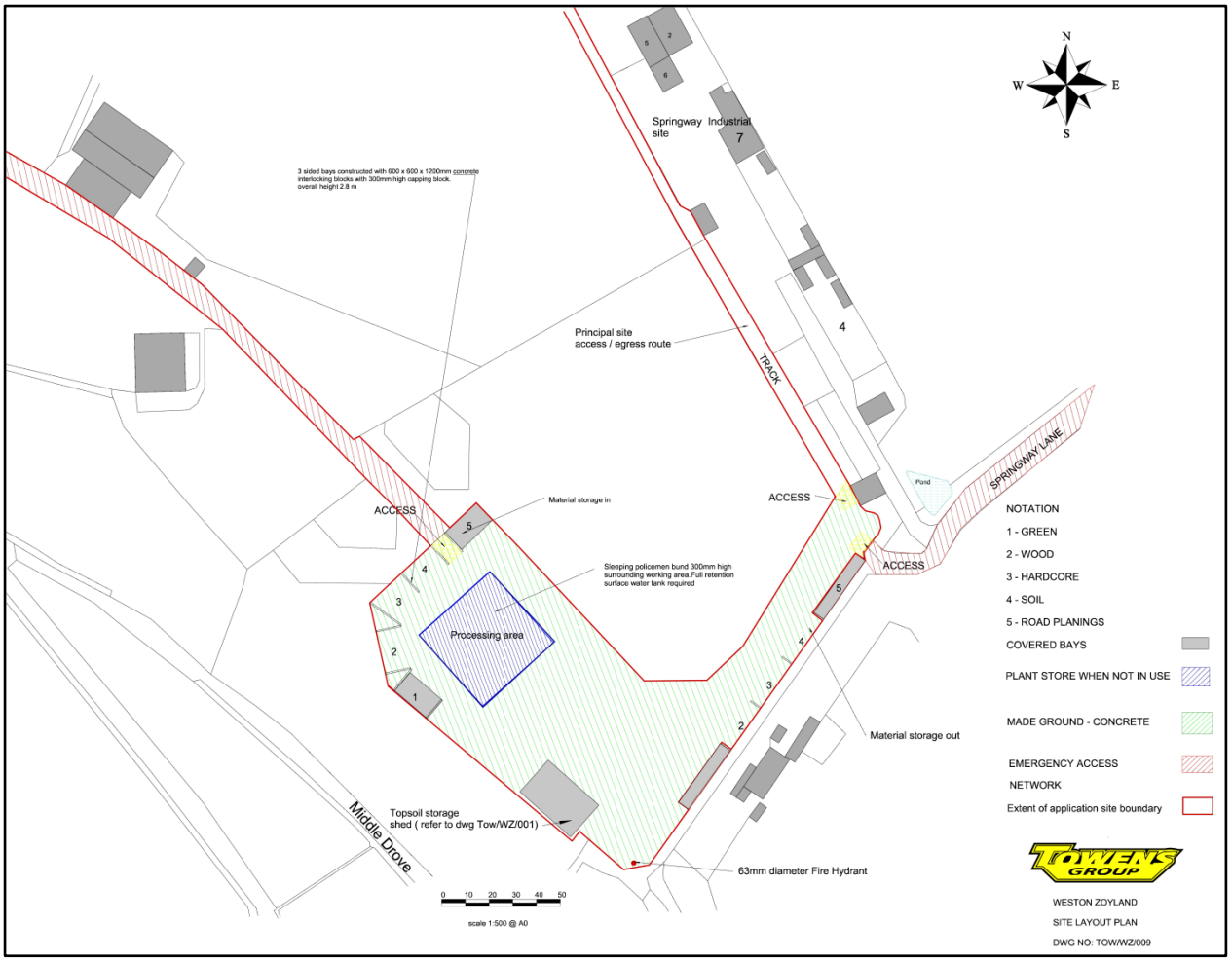

Figure 8 Proposed Buildings and Storage Bays

4.2 Materials would be delivered to the site either pre-sorted from other Towens sites or be collected in Towens vehicles in a 'clean' form from client sites. The entrance for deliveries to and from the site is indicated in the north east corner. Access onto Springway Lane is also shown but would only be used by light vehicles related to staff movements.

4.3 Storage bays would be constructed to allow the non-hazardous waste to be separated into materials that can be recycled. The external compound would be surrounded by a suitable security fence and 3.5m width double gates constructed from the same materials. Within the compound bays would be constructed to allow storage of different grades of clean hardcore, green waste and wood, topsoil and road planings. These would be sold to other commercial businesses and would be transported using Towens 8 wheel vehicles. It should be noted that there would be no direct sales from the site involving third party vehicles.

Access Junction

4.4 As mentioned previously, in the photographs section, the access onto the A372 will utilise an existing agricultural access which is constructed on part of the old runway. **Figure 9** shows the detail of the junction and indicates a width of 9.82m. As the area is already a concrete hard standing it would be possible to create a wider width if this was deemed necessary to avoid conflict with vehicles entering and leaving at the same time.

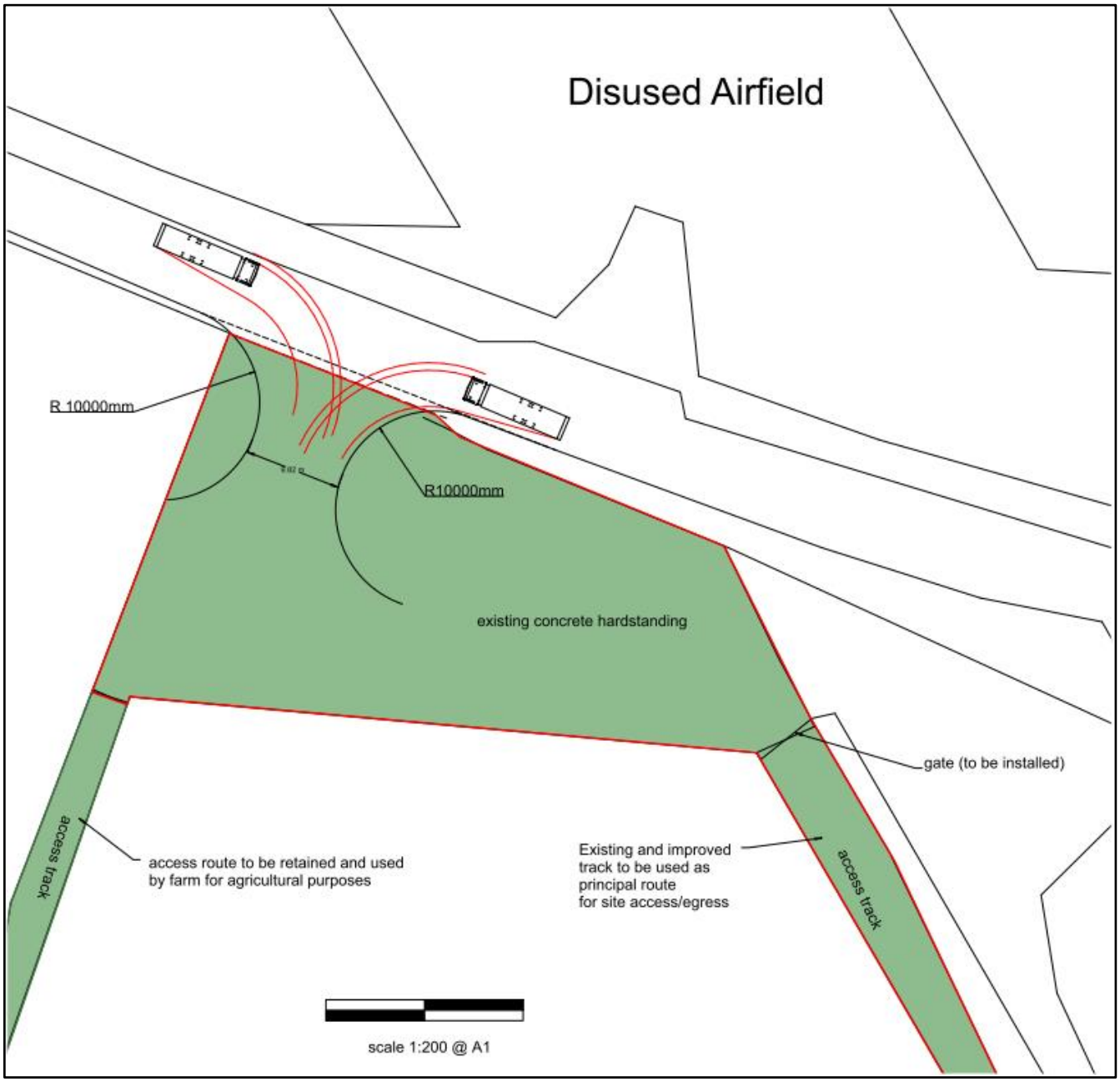

Figure 9 Proposed Access with the A372

4.5 A further **Figure 10** shows that visibility of 215m is available in each direction at a point 2.4m from the road edge. This accords with the requirements of the Design Manual for Roads and Bridges for a road with a speed limit of 60mph.

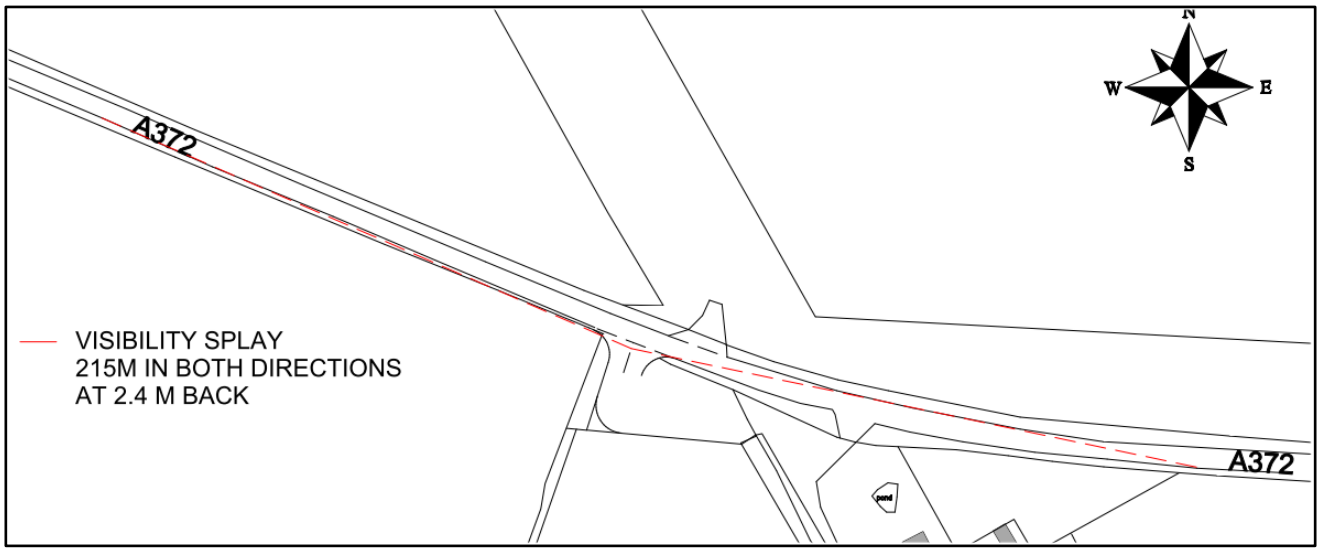

Figure 10 Visibility Splay at Access with the A372

4.6 As part of the traffic survey undertaken on 31 October a radar gun speed survey was carried out to measure the 85th percentile speed of traffic past the access. This was undertaken to ensure that speeds were below the speed limit of 60mph and in order to calculate the actual visibility splay requirements related to the 85th percentile speed. The survey results are shown in **Appendix A** and indicate an 85th percentile speed of 54mph for westbound traffic and 51mph in the eastbound direction. Based on these speeds a visibility of 171 metres is required to the right and 154 metres to the left for vehicles emerging from the junction.

4.7 The actual distances available exceed these values and confirm that the junction will meet the required highway design standards.

Trip Generation

4.8 The proposed use of the site will utilise up to 5 x 8 wheel lorries that would be based at the site and allow early morning deliveries to customers. Between three and five staff members would be employed at the site and for the traffic analysis will be assumed to arrive in individual cars.

4.9 The likely average HGV vehicle movements per day have been assessed by Towens and are shown in the table below:

	West			East			Total
Daily	8 wheel tippers	Artic	Total Tonnes	8 wheel tippers	Artic	Total Tonnes	Daily Tonnes
Average Daily	5.0	0.6	120	3.4	0.2	72	192.3
Peak Daily	25.2	3.2	600	16.9	0.8	362	962
Annual	1310	166	31185	877	42	18815	50000

4.10 The annual tonnage is a maximum of 50,000 with about 31,000 tonnes coming from the west through Westonzoyland and 19,000 tonnes from the east. These figures are clearly estimates based on commercial experience and in terms of proportions from the east and west can vary from day to day. The daily average figures are based on 260 weekdays per annum resulting in a daily 192.3 tonnes.

4.11 Eight wheel 20 tonne capacity vehicles would be used to transport aggregate and topsoil to the site and articulated 30 tonne capacity vehicles for the wood chip and green waste. In an average year it is anticipated that 31,000 tonnes of aggregate, 12,500 tonnes of topsoil and 6,500 tonnes of wood and green waste would be handled.

4.12 By use of these proportions it has been possible to estimate the number of vehicle movements per day as shown in the 'Average Daily' row of the table. This indicates 11.4 two-way movements to the west through Westonzoyland and 7.1 two-way movements to the east. A 'Peak Daily' figure is also shown indicating peaks in demand based on a factor of 5 times the average situation. This situation could obviously not be maintained for prolonged periods but allows for the fluctuations that occur in the production of waste materials. The converse situation is that trade dips could result in days when very few if any movements would take place.

4.13 The opening hours of the site would be from 0700 hours to 1700 hours with a fairly uniform movement of vehicles taking place throughout the day. Two tables have been produced as shown below indicating the predicted hour by hour HGV movements to the west and east from the site. These are shown for both the 'average daily' and 'peak daily' situations.

4.14 The most likely 'average daily' situation adds just 2 two-way HGV movements through Westonzoyland in the am peak hour which represents a 0.3% increase in traffic flows to the west of the village and 0.35% to the east. For the 'peak daily' figures, which are based on a factor of 5 times the average, the corresponding percentage increases are 1.6% and 1.7%.

4.15 The number of HGVs through the village (in the am peak hour) would equate to one vehicle every 6 minutes for the 'peak daily' scenario with one vehicle every 30 minutes in the more realistic 'average daily' situation. In both cases the traffic impact in the village is very small and will not adversely affect the free flow of traffic through the village.

4.16 Details of the proposed access junction with the A372 are shown and indicate visibility splays of at least 215 metres in each direction. The predicted traffic movements at the new access show a maximum of 1 HGV movement every 3 minutes at the start of the day between 0700 and 0800 hours. This is based on the 'peak daily' tests and would not cause any disruption to the free flow of traffic on the A372.

4.17 Staff movements are likely to be made via the Springway Lane access and will not have any impact on the junction of Springway Lane with the A372.

4.18 In order to show the possible impact through the day a table is shown below of the 'average daily' situation with 12 two-way movements to the west and 8 two-way movements to the east. These figures have been 'rounded up' based on the prediction in para.4.12.

AverageDaily	West			East			Total		
Hours	in	out	2-way	in	out	2-way	in	out	2-way
07:00	1	1	2	1	1	2	2	2	4
08:00	1	1	2	1	1	2	2	2	4
09:00	0	1	1	0	0	0	0	1	1
10:00	1	1	2	0	0	0	1	1	2
11:00	0	0	0	0	1	1	0	1	1
12:00	1	1	2	0	0	0	1	1	2
13:00	0	0	0	1	0	1	1	0	1
14:00	1	1	2	0	1	1	1	2	3
15:00	0	0	0	0	0	0	0	0	0
16:00	1	0	1	1	0	1	2	0	2
Total	**6**	**6**	**12**	**4**	**4**	**8**	**10**	**10**	**20**

4.19 This shows maximum two-way flows at the site entrance of 4 HGVs at the start of the day with some hours where either no vehicles are predicted or one vehicle will be entering or leaving. The net impact on the A372 will clearly be minimal.

5 Summary & Conclusion

5.1 The application seeks permission for the construction and operation of a Materials Re-processing Facility and ancillary development (part retrospective) where materials will be treated, stored for short periods and then transported for re-use. The operations are expected to handle no more than 50,000 tonnes of Commercial & Industrial waste per annum.

5.2 The site is located to the east of Westonzoyland and to the south of the A372. It is adjacent to the Springway Lane Industrial Estate within the Westonzoyland Airfield. The development proposal entails construction of a storage facility for different types of recycled materials. Materials would be delivered to the site either pre-sorted from other Towens sites or be collected in Towens vehicles in a 'clean' form from client sites. The recycled materials will then be sold to customers and delivered by Towens.

5.3 A description is provided of the A372 and the route that would be used to gain access to the M5 at Junction 23. This route goes through the adjacent village of Westonzoyland on a zigzag route through two sharp bends. The bends have both been widened in the past and are of sufficient width for an HGV and a light vehicle to pass one another. If two HGVs meet it would be necessary for one vehicle to give way to the other.

5.4 In order to assess the impact of the development data has been provided by Towens of the likely HGV movements consistent with the 50,000 tonne capacity of the site. A traffic survey was also undertaken to determine the am peak flows in the centre of the village. The analysis has taken account of an 'average day' situation based on the 50,000 tonnes being equally spread across the 260 weekdays of the year. It has also determined the effect of a 'peak daily' situation with flows of 5 times the average. The latter is an extreme case but does realistically take account of the peak demand that can occur from time to time.

5.5 The results of the analysis show that even in the 'peak daily' case traffic flows in the am peak hour will only increase by a maximum of 1.7% which is well within the day to day variation that would occur on this type of road. The number of HGVs through the village would equate to one vehicle every 6 minutes in the 'peak daily' scenario with one vehicle every 30 minutes in the more realistic 'average daily' situation.

5.6 Details of the proposed access junction with the A372 are shown and indicate visibility splays of at least 215 metres in each direction. The predicted traffic movements at the new access show a maximum of 1 HGV movement every 3 minutes at the start of the day between 0700 and 0800 hours. This is based on the 'peak daily' tests and would not cause any disruption to the free flow of traffic on the A372.

5.7 The only traffic impact will be during the construction of the bay walls inside the compound and also the construction of the fence and gates. Careful control of vehicle movements will ensure that surrounding businesses are not adversely affected.

5.8 Therefore, we conclude that this development is appropriate and acceptable in traffic and transport terms.

Appendix A

Radar Speed Survey

Radar Speed Survey LvW Highways Appendix A

Location	Site of New Access
Date	31 October 2017
Weather	Fine
Speed Limit	60mph
Name of Observer	Paul Lacey
Carriageway Type	Rural Single Carriageway
Job No	**2017_386 Westonzoyland**
Meter Readings (mph or kph)	mph

Taunton Office:
4 Mountway Close
Bishops Hull
Taunton
Somerset
TA1 5LP
m: 07770 775835
t: 01823 257208

RESULTS

Direction **Westbound**
Time Period **0905 - 1015**

42	49	59	48	44	47	49	56	50	55	52	48	63	51	48	55	49	52	44	46
50	61	42	40	59	44	63	54	51	56	50	54	46	55	48	48	65	53	48	42
40	53	39	54	42	44	48	60	47	44	52	46	49	56	44	58	63	43	68	59
40	44	46	43	51	51	46	51	54	53	56	52	42	39	57	40	48	49	52	45
53	49	48	52	42	49	45	44	54	57	47	46	39	53	54	58	45	62	64	51

Mean Speed: **50 mph**

85th%ile Speed
Dry: 57 mph **91 kph**
Wet: 54 mph **87 kph**

Direction **Eastbound**
Time Period **0905 - 1015**

54	42	48	50	65	55	46	52	46	48	50	44	54	42	45	55	54	44	51	46
55	53	51	51	48	62	49	44	46	46	43	43	54	45	49	53	51	56	48	46
47	44	52	53	50	54	41	50	49	42	43	54	51	44	44	41	35	56	38	48
51	52	53	53	47	49	47	53	46	40	51	40	43	54	56	52	42	39	49	46
48	47	46	46	49	43	42	48	50	50	47	47	53	40	56	53	49	47	38	49

Mean Speed: **48 mph**

85th%ile Speed
Dry: 54 mph **86 kph**
Wet: 51 mph **82 kph**

85th %ile Speed

Westbound	**54.2**	mph
Eastbound	**51.0**	mph

Gradient

0%	percent	
0%	percent	

Visibility Requirements in Metres

DMRB	**Westbound**	**171**
	Eastbound	**154**

Document Title: Westonzoyland Risk Assessment
Permit application ref: EPR/FB3101UX

Prepared By: Rebecca Bomers
On behalf of: Towens of Weston Ltd

Date: 14/11/2018

Source	Receptor	Pathway	Harm	Likelihood (Out of 5)	Consequence (Out of 5)	Initial Risk Rating (Max of 25)	Justification	Risk Management	Likelihood (Out of 5)	Consequence (out of5)	Residual risk
Dust and particulates from crushing aggregate and chipping wood	local human population - Bungalow to the North of the site	Airbourne then inhalation or entering eyes	Harm to human health - respiratory irritation and illness. Eye irritation.	2	4	8	The likelihood is low as the bungalow is not in the prevailing wind direction, it has thick conifer trees around the perimeter and is a 300 metres away across a field used for maize. Consequence is high as dust can have severe health impacts if person has established breathing difficulties e.g. asthma.	The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	4	4
Dust and particulates from crushing aggregate and chipping wood	local human population - Caravan park to the South-East of the site	Airbourne then inhalation or entering eyes	Harm to human health - respiratory irritation and illness. Eye irritation.	5	4	20	The likelihood is high as previous history has shown the caravan park to be affected by dust when wood chipping has taken place. Consequnce is high as dust can have severe health impacts if person has established breathing difficulties e.g. asthma.	The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	4	4
Dust and particulates from crushing aggregate and chipping wood	local human population - Westonzoyland village to the West of the site	Airbourne then inhalation or entering eyes	Harm to human health - respiratory irritation and illness. Eye irritation.	1	4	4	The likelihood is very low as the village is not in the prevailling wind direction and is a considerable distance (800m+) away from the site. Consequnce is high as dust can have severe health impacts if person has established breathing difficulties e.g. asthma.	The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	4	4
Dust and particulates from crushing aggregate and chipping wood	local human population - industrial estate users and workers to the North and East of the site.	Airbourne then inhalation or entering eyes	Harm to human health - respiratory irritation and illness. Eye irritation.	4	4	16	The likelihood is high as the industrial estate is in the prevailling wind direction. However there are tall buildings and trees that form the border of the industrial estate. Consequnce is high as dust can have severe health impacts if person has established breathing difficulties e.g. asthma.	The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	4	4
Dust and particulates from crushing aggregate and chipping wood	local human population - road users of the A372 to the North of the site.	Airbourne then reduced visibility	Reduced visibility while driving resulting in road accident.	2	5	10	The likelihood is low as although the A372 is in the prevailing wind direction, there is an industrial estate, bordered by buildings and trees between the site and the road. Consequnce is high as a road traffic collision can result in death.	The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	5	5
Dust and particulates from crushing aggregate and chipping wood	local human population using area for receational purposes e.g. fishing, walking.	Airbourne then inhalation or entering eyes	Harm to human health - respiratory irritation and illness. Eye irritation.	1	2	2	Likelihood is low as the prevailing wind direction is in the opposite direction and the frequency of recreational users coming into contact with dust (if it were to blow in that direction) is low. Consequnce is low as the recreational users aren't likely to stay in a dusty area so the encounter is transient.	The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	2	2
Dust and particulates from crushing aggregate and chipping wood	Langmead and Weston SSSI to the South of the site	Airbourne then deposition into water and onto land	Harm to protected invertebrates by increasing suspended soilids in watercourses. Harm to protected grassland by smothering. Harm to other wildlife by ingestion / inhalation.	2	3	6	Lielihood is low as the prevailling wind is in the oposite direction. The SSSI is approximately 50m away from the site and is bordered by a high and thick hedgerow and trees. The consequnce is medium because although dust has a small likelihood of entering the SSSI it is likely to be quickly washed off of flora with rain. The consequnce isn't low because any dust washed off the flora may enter the watercourse, which has a slow flow rate and therefore it may lead to some smothering.	Ecological survey carried out to assess species and impacts, Doc ref: 'I260_Former Aerodrome_Ecological Appraisal_First Ecology The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	3	3
Dust and particulates from crushing aggregate and chipping wood	Pigditch Rhyne Network and Weston Level Local Wildlife site to the South of the Site	Airbourne then deposition into water and onto land	Harm to invertebrates by increasing suspended soilids in watercourses. Harm to flora by smothering. Harm to other wildlife by ingestion / inhalation.	2	3	6	Lielihood is low as the prevailling wind is in the oposite direction. The Pigditch rhyne network is 600m away from the site. Between the site and the Network there is a high and thick hedgerow and trees as well as two roads. The consequnce is medium because although dust has a small likelihood of entering the network, it is likely to be quickly washed off of flora with rain. The consequnce isn't low because any dust washed off the flora may enter the watercourse, which has a slow flow rate and therefore it may lead to some smothering.	Ecological survey carried out to assess species and impacts, Doc ref: 'I260_Former Aerodrome_Ecological Appraisal_First Ecology The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	3	3
Dust and particulates from crushing aggregate and chipping wood	Lang Moor wildlife site to the North-West of the site	Airbourne then deposition into water and onto land	Harm to invertebrates by increasing suspended soilids in watercourses. Harm to flora by smothering. Harm to other wildlife by ingestion / inhalation.	1	3	3	Likelihood is extremely low as the Langmoor wildlife site is nearly 2km away from the propsed operational site and the water system surrounding the operational site does not link to the water system of Lang moor. It is also away from the prevailling wind direction. The consequnce is medium because although dust has a small likelihood of entering the network, it is likely to be quickly washed off of flora with rain. The consequnce isn't low because any dust washed off the flora may enter the watercourse, which has a slow flow rate and therefore it may lead to some smothering.	Ecological survey carried out to assess species and impacts, Doc ref: 'I260_Former Aerodrome_Ecological Appraisal_First Ecology The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	3	3

Dust and particulates from crushing aggregate and chipping wood	Greylake RSPB reserve to North-East of the site.	Airbourne then deposition into water and onto land	Harm to invertebrates by increasing suspended soilids in watercourses. Harm to flora by smothering. Harm to other wildife by ingestion / inhalation. Damage to habitat / other species may affect the birds in the reserve.	1	3	3	Likelihood is extremely low as theRSPB reserve is nearly 2km away from the propsed operational site and the water system surrounding the operational site does not link to the water system of the reserve. The consequnce is medium because although dust has a small likelihood of entering the network, it is likely to be quickly washed off of flora with rain. The consequnce isn't low because any dust washed off the flora may enter the watercourse, which has a slow flow rate and therefore it may lead to some smothering.	Ecological survey carried out to assess species and impacts, Doc ref: 'I260_Former Aerodrome_Ecological Appraisal_First Ecology The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	3	3
Dust and particulates from crushing aggregate and chipping wood	Kings Sedgemoor Drain SSSI	Airbourne then deposition into water and onto land	Harm to protected invertebrates by increasing suspended soilids in watercourses. Harm to protected grassland by smothering. Harm to other wildife by ingestion / inhalation.	1	2	2	Likelihood is extremely low as the Kings Sedemoor Drain is nearly 2km away from the propsed operational site and the water system surrounding the operational site does not link to the water system of the SSSI. The consequnce is medium because although dust has a small likelihood of entering the network, it is likely to be quickly washed off of flora with rain. The consequnce isn't at the lowest because any dust washed off the flora may enter the watercourse, however the Kings Sedgemoor drain has quite a high flow rate so settling and smothering is unlikely.	Ecological survey carried out to assess species and impacts, Doc ref: 'I260_Former Aerodrome_Ecological Appraisal_First Ecology The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	2	2
Dust and particulates from crushing aggregate and chipping wood	local human population - Bungalow to the North of the site	Airbourne then deposition	Nuisance - dust on cars, windows, clothing etc.	2	1	2	The likelihood is low as the bungalow is not in the prevailing wind direction, it has thick conifer trees around the perimeter and is a 300 metres away across a field used for maize. Consequence is low as dust is being assessed as a nuisance and not a health risk.	The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	1	1
Dust and particulates from crushing aggregate and chipping wood	local human population - Caravan park to the South-East of the site	Airbourne then deposition	Nuisance - dust on cars, windows, clothing etc.	5	1	5	The likelihood is high as previous history has shown the caravan park to be affected by dust when wood chipping has taken place. Consequence is low as dust is being assessed as a nuisance and not a health risk.	The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	1	1
Dust and particulates from crushing aggregate and chipping wood	local human population - Westonzoyland village to the West of the site	Airbourne then deposition	Nuisance - dust on cars, windows, clothing etc.	1	1	1	The likelihood is very low as the village is not in the prevailling wind direction and is a considerable distance (800m+) away from the site. Consequence is low as dust is being assessed as a nuisance and not a health risk.	The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	1	1
Dust and particulates from crushing aggregate and chipping wood	local human population - industrial estate users and workers to the North and East of the site.	Airbourne then deposition	Nuisance - dust on cars, windows, clothing etc.	4	1	4	The likelihood is high as the industrial estate is in the prevailling wind direction. However there are tall buildings and trees that form the border of the industrial estate. Consequence is low as dust is being assessed as a nuisance and not a health risk.	The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	1	1
Dust and particulates from crushing aggregate and chipping wood	local human population using area for receational purposes e.g. fishing, walking.	Airbourne then deposition	Nuisance - dust on cars, clothing etc.	1	1	1	Likelihood is low as the prevailing wind direction is in the opposite direction and the frequency of recreational users coming into contact with dust (if it were to blow in that direction) is low. Consequnce is low as the recreational users aren't likely to stay in a dusty area so the encounter is transient and the dust is being assessed as a nuisance and not a helath risk.	The site will be enclosed by concrete walls between 2.4 and 3m high, as shown on plan '41121_70482_180608_Towens of Weston_Site Plan' A dust management plan is in place and forms part of this application, Doc Ref: '41121_70496_Towens Dust Management Plan'.	1	1	1
Noise and vibration from machinery - crushing aggregate, chipping wood and screening soils.	local human population - Bungalow to the North of the site	Noise through the air and vibration through the ground	Nuisance Loss of amenity Loss of sleep	2	2	4	A noise survey has been carried out by Wardell-Armstrong and has found that there is unlikley to be any noise nuisance from the operating site. The site is already bordered by agriculture with the noise of agricultural machinery, an industrial estate and a busy A372 road. The noise from the operational site has been found not to be above already exisitng background noise levels.	A full noise survey has been conducted (Doc Ref: CA11269_Noise Assessment Report-MD) to assess the impact to local residents and nearby SSSI's. This has found the noise level from the site to be below background noise with the exception of the noise levels at Langmead and Weston SSSI, where a 6ft fence has been documented as an adequate noise barrier. Towens are enclosing the site on all sides with a concrete wall between 2.4 and 3 m high, as shown on plan ref: '41121_70482_180608_Towens of Weston_Site Plan'	1	2	2
Noise and vibration from machinery - crushing aggregate, chipping wood and screening soils.	local human population - Caravan park to the South-East of the site	Noise through the air and vibration through the ground	Nuisance Loss of amenity Loss of sleep	2	2	4	A noise survey has been carried out by Wardell-Armstrong and has found that there is unlikley to be any noise nuisance from the operating site. The site is already bordered by agriculture with the noise of agricultural machinery, an industrial estate and a busy A372 road. The noise from the operational site has been found not to be above already exisitng background noise levels.	A full noise survey has been conducted (Doc Ref: CA11269_Noise Assessment Report-MD) to assess the impact to local residents and nearby SSSI's. This has found the noise level from the site to be below background noise with the exception of the noise levels at Langmead and Weston SSSI, where a 6ft fence has been documented as an adequate noise barrier. Towens are enclosing the site on all sides with a concrete wall between 2.4 and 3 m high, as shown on plan ref: '41121_70482_180608_Towens of Weston_Site Plan'	1	2	2
Noise and vibration from machinery - crushing aggregate, chipping wood and screening soils.	local human population - Westonzoyland village to the West of the site	Noise through the air and vibration through the ground	Nuisance Loss of amenity Loss of sleep	1	2	2	A noise survey has been carried out by Wardell-Armstrong and has found that there is unlikley to be any noise nuisance from the operating site. The site is already bordered by agriculture with the noise of agricultural machinery, an industrial estate and a busy A372 road. The noise from the operational site has been found not to be above already exisitng background noise levels.	A full noise survey has been conducted (Doc Ref: CA11269_Noise Assessment Report-MD) to assess the impact to local residents and nearby SSSI's. This has found the noise level from the site to be below background noise with the exception of the noise levels at Langmead and Weston SSSI, where a 6ft fence has been documented as an adequate noise barrier. Towens are enclosing the site on all sides with a concrete wall between 2.4 and 3 m high, as shown on plan ref: '41121_70482_180608_Towens of Weston_Site Plan'	1	2	2

Noise and vibration from machinery - crushing aggregate, chipping wood and screening soils.	local human population - industrial estate users and workers to the North and East of the site.	Noise through the air and vibration through the ground	Nuisance Health and Safety at work issue.	1	2	2	A noise survey has been carried out by Wardell-Armstrong and has found that there is unlikley to be any noise nuisance from the operating site. The site is already bordered by agriculture with the noise of agricultural machinery, an industrial estate and a busy A372 road. The noise from the operational site has been found not to be above already exisitng background noise levels.	A full noise survey has been conducted (Doc Ref: CA11269_Noise Assessment Report-MD) to assess the impact to local residents and nearby SSSI's. This has found the noise level from the site to be below background noise with the exception of the noise levels at Langmead and Weston SSSI, where a 6ft fence has been documented as an adequate noise barrier. Towens are enclosing the site on all sides with a concrete wall between 2.4 and 3 m high, as shown on plan ref: '41121_70482_180608_Towens of Weston_Site Plan'	1	2	2
Noise and vibration from machinery - crushing aggregate, chipping wood and screening soils.	local human population using area for receational purposes e.g. fishing, walking.	Noise through the air and vibration through the ground	Nuisance Loss of amenity	1	1	1	A noise survey has been carried out by Wardell-Armstrong and has found that there is unlikley to be any noise nuisance from the operating site. The site is already bordered by agriculture with the noise of agricultural machinery, an industrial estate and a busy A372 road. The noise from the operational site has been found not to be above already exisitng background noise levels.	A full noise survey has been conducted (Doc Ref: CA11269_Noise Assessment Report-MD) to assess the impact to local residents and nearby SSSI's. This has found the noise level from the site to be below background noise with the exception of the noise levels at Langmead and Weston SSSI, where a 6ft fence has been documented as an adequate noise barrier. Towens are enclosing the site on all sides with a concrete wall between 2.4 and 3 m high, as shown on plan ref: '41121_70482_180608_Towens of Weston_Site Plan'	1	1	1
Noise and vibration from machinery - crushing aggregate, chipping wood and screening soils.	Langmead and Weston SSSI to the South of the site	Noise through the air and vibration through the ground	May impact on birds using Langmead andWeston SSSI en-route to Kings Sedgemoor SSSI	2	3	6	A noise survey has been carried out by Wardell-Armstrong and has found that there is unlikley to be any noise nuisance from the operating site. The site is already bordered by agriculture with the noise of agricultural machinery, an industrial estate and a busy A372 road. The noise from the operational site has been found to be slighlty above already exisitng background noise levels. The consequnce is medium becuase there is a chance that birds may rest here en-route to other sites.	A full noise survey has been conducted (Doc Ref: CA11269_Noise Assessment Report-MD) to assess the impact to local residents and nearby SSSI's. This has found the noise level from the site to be below background noise with the exception of the noise levels at Langmead and Weston SSSI, where a 6ft fence has been documented as an adequate noise barrier. Towens are enclosing the site on all sides with a concrete wall between 2.4 and 3 m high, as shown on plan ref: '41121_70482_180608_Towens of Weston_Site Plan'	1	3	3
Noise and vibration from machinery - crushing aggregate, chipping wood and screening soils.	Pigditch Rhyne Network and Weston Level Local Wildlife site to the South of the Site	Noise through the air and vibration through the ground	May impact on birds using local widlife site en-route to Kings Sedgemoor SSSI. May impact on other noise sensitive animals.	1	2	2	A noise survey has been carried out by Wardell-Armstrong and has found that there is unlikley to be any noise nuisance from the operating site. The site is already bordered by agriculture with the noise of agricultural machinery, an industrial estate and a busy A372 road. The noise from the operational site has been found not to be above already exisitng background noise levels.	A full noise survey has been conducted (Doc Ref: CA11269_Noise Assessment Report-MD) to assess the impact to local residents and nearby SSSI's. This has found the noise level from the site to be below background noise with the exception of the noise levels at Langmead and Weston SSSI, where a 6ft fence has been documented as an adequate noise barrier. Towens are enclosing the site on all sides with a concrete wall between 2.4 and 3 m high, as shown on plan ref: '41121_70482_180608_Towens of Weston_Site Plan'	1	2	2
Noise and vibration from machinery - crushing aggregate, chipping wood and screening soils.	Lang Moor wildlife site to the North-West of the site	Noise through the air and vibration through the ground	May impact on birds using local widlife site en-route to Kings Sedgemoor SSSI. May impact on other noise sensitive animals.	1	2	2	A noise survey has been carried out by Wardell-Armstrong and has found that there is unlikley to be any noise nuisance from the operating site. The site is already bordered by agriculture with the noise of agricultural machinery, an industrial estate and a busy A372 road. The noise from the operational site has been found not to be above already exisitng background noise levels.	A full noise survey has been conducted (Doc Ref: CA11269_Noise Assessment Report-MD) to assess the impact to local residents and nearby SSSI's. This has found the noise level from the site to be below background noise with the exception of the noise levels at Langmead and Weston SSSI, where a 6ft fence has been documented as an adequate noise barrier. Towens are enclosing the site on all sides with a concrete wall between 2.4 and 3 m high, as shown on plan ref: '41121_70482_180608_Towens of Weston_Site Plan'	1	2	2
Noise and vibration from machinery - crushing aggregate, chipping wood and screening soils.	Greylake RSPB reserve to North-East of the site.	Noise through the air and vibration through the ground	May impact on birds using the reserve.	1	4	4	A noise survey has been carried out by Wardell-Armstrong and has found that there is unlikley to be any noise nuisance from the operating site. The site is already bordered by agriculture with the noise of agricultural machinery, an industrial estate and a busy A372 road. The noise from the operational site has been found not to be above already exisitng background noise levels. The consequnce is higher becuase if there were noise, birds would be particularly affected.	A full noise survey has been conducted (Doc Ref: CA11269_Noise Assessment Report-MD) to assess the impact to local residents and nearby SSSI's. This has found the noise level from the site to be below background noise with the exception of the noise levels at Langmead and Weston SSSI, where a 6ft fence has been documented as an adequate noise barrier. Towens are enclosing the site on all sides with a concrete wall between 2.4 and 3 m high, as shown on plan ref: '41121_70482_180608_Towens of Weston_Site Plan'	1	4	4
Noise and vibration from machinery - crushing aggregate, chipping wood and screening soils.	Kings Sedgemoor Drain SSSI	Noise through the air and vibration through the ground	May impact on birds using the SSSI	1	4	4	A noise survey has been carried out by Wardell-Armstrong and has found that there is unlikley to be any noise nuisance from the operating site. The site is already bordered by agriculture with the noise of agricultural machinery, an industrial estate and a busy A372 road. The noise from the operational site has been found not to be above already exisitng background noise levels. The consequnce is higher becuase if there were noise, birds would be particularly affected.	A full noise survey has been conducted (Doc Ref: CA11269_Noise Assessment Report-MD) to assess the impact to local residents and nearby SSSI's. This has found the noise level from the site to be below background noise with the exception of the noise levels at Langmead and Weston SSSI, where a 6ft fence has been documented as an adequate noise barrier. Towens are enclosing the site on all sides with a concrete wall between 2.4 and 3 m high, as shown on plan ref: '41121_70482_180608_Towens of Weston_Site Plan'	1	4	4
Litter	local human population - Bungalow to the North of the site	Airbourne then deposition	Loss of amenity Harm to animal health-pets and wildlife.	1	1	1	There is no waste on site that could become wind blown litter.	Towens operate in accordance with a documented Environment Management system. Doc Ref: SWP019 The EMS contains policies and processes on waste acceptance and rejection Doc Refs: SWP012 & SWP008.	1	1	1
Litter	local human population - Caravan park to the South-East of the site	Airbourne then deposition	Loss of amenity Harm to animal health-pets and wildlife.	1	1	1	There is no waste on site that could become wind blown litter.	Towens operate in accordance with a documented Environment Management system. Doc Ref: SWP019 The EMS contains policies and processes on waste acceptance and rejection Doc Refs: SWP012 & SWP008.	1	1	1
Litter	local human population - Westonzoyland village to the West of the site	Airbourne then deposition	Loss of amenity Harm to animal health-pets wildlife and agricultural animals.	1	1	1	There is no waste on site that could become wind blown litter.	Towens operate in accordance with a documented Environment Management system. Doc Ref: SWP019 The EMS contains policies and processes on waste acceptance and rejection Doc Refs: SWP012 & SWP008.	1	1	1
Litter	local human population - industrial estate users and workers to the North and East of the site.	Airbourne then deposition	Loss of amenity Increased litter on floor may lead to people slipping over.	1	1	1	There is no waste on site that could become wind blown litter.	Towens operate in accordance with a documented Environment Management system. Doc Ref: SWP019 The EMS contains policies and processes on waste acceptance and rejection Doc Refs: SWP012 & SWP008.	1	1	1
Litter	local human population - road users of the A372 to the North of the site.	Airbourne then deposition	Airbourne litter may obstruct vision when driving.	1	1	1	There is no waste on site that could become wind blown litter.	Towens operate in accordance with a documented Environment Management system. Doc Ref: SWP019 The EMS contains policies and processes on waste acceptance and rejection Doc Refs: SWP012 & SWP008.	1	1	1

Litter	Langmead and Weston SSSI to the South of the site	Airbourne then deposition	Litter deposited in waterways may cause pollution by: *Leaching, *Taking oxygen from the water to break-down; *Block light. Litter may harm wildlife by ingestion or getting trapped. Watercourse screens and pumps may get blocked.	1	1	1	There is no waste on site that could become wind blown litter.	Towens operate in accordance with a documented Environment Management system. Doc Ref: SWP019 The EMS contains policies and processes on waste acceptance and rejection Doc Refs: SWP012 & SWP008.	1	1	1
Litter	Pigditch Rhyne Network and Weston Level Local Wildlife site to the South of the Site	Airbourne then deposition	Litter deposited in waterways may cause pollution by: *Leaching, *Taking oxygen from the water to break-down; *Block light. Litter may harm wildlife by ingestion or getting trapped. Watercourse screens and pumps may get blocked.	1	1	1	There is no waste on site that could become wind blown litter.	Towens operate in accordance with a documented Environment Management system. Doc Ref: SWP019 The EMS contains policies and processes on waste acceptance and rejection Doc Refs: SWP012 & SWP008.	1	1	1
Litter	Lang Moor wildlife site to the North-West of the site	Airbourne then deposition	Litter deposited in waterways may cause pollution by: *Leaching, *Taking oxygen from the water to break-down; *Block light. Litter may harm wildlife by ingestion or getting trapped. Watercourse screens and pumps may get blocked.	1	1	1	There is no waste on site that could become wind blown litter.	Towens operate in accordance with a documented Environment Management system. Doc Ref: SWP019 The EMS contains policies and processes on waste acceptance and rejection Doc Refs: SWP012 & SWP008.	1	1	1
Litter	Greylake RSPB reserve to North-East of the site.	Airbourne then deposition	Litter deposited in waterways may cause pollution by: *Leaching, *Taking oxygen from the water to break-down; *Block light. Litter may harm wildlife by ingestion or getting trapped. Watercourse screens and pumps may get blocked.	1	1	1	There is no waste on site that could become wind blown litter.	Towens operate in accordance with a documented Environment Management system. Doc Ref: SWP019 The EMS contains policies and processes on waste acceptance and rejection Doc Refs: SWP012 & SWP008.	1	1	1
Mud on local roads	local human population - Bungalow to the North of the site	Vehicles entering and leaving site	Loss of amenity Road traffic accidents Slips and falls	2	4	8	The likelihood is low as the predominant waste trype that produces mud is soil; the soil is all being stored inside of a building. There vehicles have to drive over 600m alond a provate access track to reach the main road; any mud is likely to have fallen off the vehicle before it reaches the main road. The consequnce is high as mud on a road can cause road traffic accidents, resulting in a wirse case scenario of death.	A site diary is in place as part of the EMS and this includes the need to inspect the roads for mud twice per day. Doc Ref: SSF031. If mud is found on the road, Towens operate their own fleet of road sweepers, which can clean the road straight away. There is also a procedure in place covering mud on the highways, Doc Ref: SWP076.	1	4	4
Mud on local roads	local human population - Caravan park to the South-East of the site	Vehicles entering and leaving site	Loss of amenity Road traffic accidents Slips and falls	2	4	8	The likelihood is low as the predominant waste trype that produces mud is soil; the soil is all being stored inside of a building. There vehicles have to drive over 600m alond a provate access track to reach the main road; any mud is likely to have fallen off the vehicle before it reaches the main road. The consequnce is high as mud on a road can cause road traffic accidents, resulting in a wirse case scenario of death.	A site diary is in place as part of the EMS and this includes the need to inspect the roads for mud twice per day. Doc Ref: SSF031. If mud is found on the road, Towens operate their own fleet of road sweepers, which can clean the road straight away. There is also a procedure in place covering mud on the highways, Doc Ref: SWP076.	1	4	4
Mud on local roads	local human population - Westonzoyland village to the West of the site	Vehicles entering and leaving site	Loss of amenity Road traffic accidents Slips and falls	2	4	8	The likelihood is low as the predominant waste trype that produces mud is soil; the soil is all being stored inside of a building. There vehicles have to drive over 600m alond a provate access track to reach the main road; any mud is likely to have fallen off the vehicle before it reaches the main road. The consequnce is high as mud on a road can cause road traffic accidents, resulting in a wirse case scenario of death.	A site diary is in place as part of the EMS and this includes the need to inspect the roads for mud twice per day. Doc Ref: SSF031. If mud is found on the road, Towens operate their own fleet of road sweepers, which can clean the road straight away. There is also a procedure in place covering mud on the highways, Doc Ref: SWP076.	1	4	4
Mud on local roads	local human population - industrial estate users and workers to the North and East of the site.	Vehicles entering and leaving site	Loss of amenity Road traffic accidents Slips and falls	2	4	8	The likelihood is low as the predominant waste trype that produces mud is soil; the soil is all being stored inside of a building. There vehicles have to drive over 600m alond a provate access track to reach the main road; any mud is likely to have fallen off the vehicle before it reaches the main road. The consequnce is high as mud on a road can cause road traffic accidents, resulting in a wirse case scenario of death.	A site diary is in place as part of the EMS and this includes the need to inspect the roads for mud twice per day. Doc Ref: SSF031. If mud is found on the road, Towens operate their own fleet of road sweepers, which can clean the road straight away. There is also a procedure in place covering mud on the highways, Doc Ref: SWP076.	1	4	4
Mud on local roads	local human population - road users of the A372 to the North of the site.	Vehicles entering and leaving site	Loss of amenity Road traffic accidents Slips and falls	2	4	8	The likelihood is low as the predominant waste trype that produces mud is soil; the soil is all being stored inside of a building. There vehicles have to drive over 600m alond a provate access track to reach the main road; any mud is likely to have fallen off the vehicle before it reaches the main road. The consequnce is high as mud on a road can cause road traffic accidents, resulting in a wirse case scenario of death.	A site diary is in place as part of the EMS and this includes the need to inspect the roads for mud twice per day. Doc Ref: SSF031. If mud is found on the road, Towens operate their own fleet of road sweepers, which can clean the road straight away. There is also a procedure in place covering mud on the highways, Doc Ref: SWP076.	1	4	4
Increased road use	local human population - Bungalow to the North of the site	Vehicles entering and leaving site	Loss of amenity Road traffic accidents Pedestrians / cyclists hit by vehicles	2	4	8	The likelihood is low as the increase in vehicle movements has been assessed by a transport planner and found to be negligible. The assessment found that the road is suitable for all the vehicles that are planned to be entering and leaving site and that the visibility splay on the juntion with the main road is larger than statutorily required. The likely consequnce has to be scored high because the ultimate consequnce could result in death.	A full transport assessment has been carried out, Doc Ref: 'Towens Transport Statement'. This has found the increase in traffic to be negligible and has accounted for access / egress between the site and highway.	1	4	4

Increased road use	local human population - Caravan park to the South-East of the site	Vehicles entering and leaving site	Loss of amenity Road traffic accidents Pedestrians / cyclists hit by vehicles	2	4	8	The likelihood is low as the increase in vehicle movements has been assessed by a transport planner and found to be negligible. The assessment found that the road is suitable for all the vehicles that are planned to be entering and leaving site and that the visibility splay on the junction with the main road is larger than statutorily required. The likely consequnce has to be scored high because the ultimate consequnce could result in death.	A full transport assessment has been carried out, Doc Ref: 'Towens Transport Statement'. This has found the increase in traffic to be negligible and has accounted for access / egress between the site and highway.	1	4	4
Increased road use	local human population - Westonzoyland village to the West of the site	Vehicles entering and leaving site	Loss of amenity Road traffic accidents Pedestrians / cyclists hit by vehicles	2	4	8	The likelihood is low as the increase in vehicle movements has been assessed by a transport planner and found to be negligible. The assessment found that the road is suitable for all the vehicles that are planned to be entering and leaving site and that the visibility splay on the junction with the main road is larger than statutorily required. The likely consequnce has to be scored high because the ultimate consequnce could result in death.	A full transport assessment has been carried out, Doc Ref: 'Towens Transport Statement'. This has found the increase in traffic to be negligible and has accounted for access / egress between the site and highway.	1	4	4
Increased road use	local human population - industrial estate users and workers to the North and East of the site.	Vehicles entering and leaving site	Loss of amenity Road traffic accidents Pedestrians / cyclists hit by vehicles	2	4	8	The likelihood is low as the increase in vehicle movements has been assessed by a transport planner and found to be negligible. The assessment found that the road is suitable for all the vehicles that are planned to be entering and leaving site and that the visibility splay on the junction with the main road is larger than statutorily required. The likely consequnce has to be scored high because the ultimate consequnce could result in death.	A full transport assessment has been carried out, Doc Ref: 'Towens Transport Statement'. This has found the increase in traffic to be negligible and has accounted for access / egress between the site and highway.	1	4	
Increased road use	local human population - road users of the A372 to the North of the site.	Vehicles entering and leaving site	Loss of amenity Road traffic accidents Pedestrians / cyclists hit by vehicles	2	4	8	The likelihood is low as the increase in vehicle movements has been assessed by a transport planner and found to be negligible. The assessment found that the road is suitable for all the vehicles that are planned to be entering and leaving site and that the visibility splay on the junction with the main road is larger than statutorily required. The likely consequnce has to be scored high because the ultimate consequnce could result in death.	A full transport assessment has been carried out, Doc Ref: 'Towens Transport Statement'. This has found the increase in traffic to be negligible and has accounted for access / egress between the site and highway.	1	4	4
Pests e.g. flies and rodents	local human population - Bungalow to the North of the site	Air transport and over land	Harm to human health by transmitting disease. Nuisance. Loss of amenity.	1	2	2	The likelihood is low as there are no waste types accepted that could give rise to pests. The only exception is green waste, which can cause a problem with flies if allowed to compost. However, the green waste is only to be stored unprocessed for a maximum of a week and will only be stored in its processed state for a maximum of one week. It is well documented that compost only becomes a problem if it is anerobic for a week or so. The consequnce is low as flies are a nuisance and if they did appear in the green waste, it would only be transient as the green waste would be moved in a matter of days.	Continue to monitor daily and record findings and actions as instructed on the site diary, Doc Ref: SSF031'.	1	2	2
Pests e.g. flies and rodents	local human population - Caravan park to the South-East of the site	Air transport and over land	Harm to human health by transmitting disease. Nuisance. Loss of amenity.	1	2	2	The likelihood is low as there are no waste types accepted that could give rise to pests. The only exception is green waste, which can cause a problem with flies if allowed to compost. However, the green waste is only to be stored unprocessed for a maximum of a week and will only be stored in its processed state for a maximum of one week. It is well documented that compost only becomes a problem if it is anerobic for a week or so. The consequnce is low as flies are a nuisance and if they did appear in the green waste, it would only be transient as the green waste would be moved in a matter of days.	Continue to monitor daily and record findings and actions as instructed on the site diary, Doc Ref: SSF031'.	1	2	2
Pests e.g. flies and rodents	local human population - Westonzoyland village to the West of the site	Air transport and over land	Harm to human health by transmitting disease. Nuisance. Loss of amenity.	1	2	2	The likelihood is low as there are no waste types accepted that could give rise to pests. The only exception is green waste, which can cause a problem with flies if allowed to compost. However, the green waste is only to be stored unprocessed for a maximum of a week and will only be stored in its processed state for a maximum of one week. It is well documented that compost only becomes a problem if it is anerobic for a week or so. The consequnce is low as flies are a nuisance and if they did appear in the green waste, it would only be transient as the green waste would be moved in a matter of days.	Continue to monitor daily and record findings and actions as instructed on the site diary, Doc Ref: SSF031'.	1	2	2
Pests e.g. flies and rodents	local human population - industrial estate users and workers to the North and East of the site.	Air transport and over land	Harm to human health by transmitting disease. Nuisance. Loss of amenity.	1	2	2	The likelihood is low as there are no waste types accepted that could give rise to pests. The only exception is green waste, which can cause a problem with flies if allowed to compost. However, the green waste is only to be stored unprocessed for a maximum of a week and will only be stored in its processed state for a maximum of one week. It is well documented that compost only becomes a problem if it is anerobic for a week or so. The consequnce is low as flies are a nuisance and if they did appear in the green waste, it would only be transient as the green waste would be moved in a matter of days.	Continue to monitor daily and record findings and actions as instructed on the site diary, Doc Ref: SSF031'.	1	2	2
Pests e.g. flies and rodents	local human population using area for receational purposes e.g. fishing, walking.	Air transport and over land	Harm to human health by transmitting disease. Nuisance. Loss of amenity.	1	2	2	The likelihood is low as there are no waste types accepted that could give rise to pests. The only exception is green waste, which can cause a problem with flies if allowed to compost. However, the green waste is only to be stored unprocessed for a maximum of a week and will only be stored in its processed state for a maximum of one week. It is well documented that compost only becomes a problem if it is anerobic for a week or so. The consequnce is low as flies are a nuisance and if they did appear in the green waste, it would only be transient as the green waste would be moved in a matter of days.	Continue to monitor daily and record findings and actions as instructed on the site diary, Doc Ref: SSF031'.	1	2	2
Flooding of site	local human population - Bungalow to the North of the site	Flood waters	Waste washed off site may contaminate building/ garden. Waste washed off site or contaminated water may harm pets and wildlife. Any waste or contamination washed off-site may harm human health.	1	1	1	The Likelihood is low because the site naturally drians in North-South direction, which is away from the bungalow. The likely consequnce is low as the predominant waste type kept and processed on the site is inert. The wood and green waste aren't inert but they are deemed a very low contamination risk.	A flooding and drainage survey has been conducted by a fully qualified engineer. Doc Ref: 'HES Drainage and FRA' The site has been engineered so that all spillages and contaminated surface waters are contained. However, the perimeter walls can be un-bunged to allow the flow of flood waters, if necessary.	1	1	1

Flooding of site	local human population - Caravan park to the South-East of the site	Flood waters	Waste washed off site may contaminate building/ garden. Waste washed off site or contaminated water may harm pets and wildlife. Any waste or contamination washed off-site may harm human health.	1	1	1	The Likelihood is low because the site naturally drians in North-South direction, which is away from the bungalow. The likely consequnce is low as the predominant waste type kept and processed on the site is inert. The wood and green waste aren't inert but they are deemed a very low contamination risk.	A flooding and drainage survey has been conducted by a fully qualified engineer. Doc Ref: 'HES Drainage and FRA' The site has been engineered so that all spillages and contaminated surface waters are contained. However, the perimeter walls can be un-bunged to allow the flow of flood waters, if necessary.	1	1	1
Flooding of site	local human population - Westonzoyland village to the West of the site	Flood waters	Waste washed off site may contaminate building/ garden. Waste washed off site or contaminated water may harm pets and wildlife. Any waste or contamination washed off-site may harm human health.	1	1	1	The Likelihood is low because the site naturally drians in North-South direction, which is away from the bungalow. The likely consequnce is low as the predominant waste type kept and processed on the site is inert. The wood and green waste aren't inert but they are deemed a very low contamination risk.	A flooding and drainage survey has been conducted by a fully qualified engineer. Doc Ref: 'HES Drainage and FRA' The site has been engineered so that all spillages and contaminated surface waters are contained. However, the perimeter walls can be un-bunged to allow the flow of flood waters, if necessary.	1	1	1
Flooding of site	local human population - industrial estate users and workers to the North and East of the site.	Flood waters	Waste washed off site may contaminate building/ garden. Waste washed off site or contaminated water may harm pets and wildlife. Any waste or contamination washed off-site may harm human health.	1	1	1	The Likelihood is low because the site naturally drians in North-South direction, which is away from the bungalow. The likely consequnce is low as the predominant waste type kept and processed on the site is inert. The wood and green waste aren't inert but they are deemed a very low contamination risk.	A flooding and drainage survey has been conducted by a fully qualified engineer. Doc Ref: 'HES Drainage and FRA' The site has been engineered so that all spillages and contaminated surface waters are contained. However, the perimeter walls can be un-bunged to allow the flow of flood waters, if necessary.	1	1	1
Flooding of site	local human population - road users of the A372 to the North of the site.	Flood waters	Waste washed off site may build up on road surface, leading to road traffic accidents.	1	1	1	The Likelihood is low because the site naturally drians in North-South direction, which is away from the bungalow. The likely consequnce is low as the predominant waste type kept and processed on the site is inert. The wood and green waste aren't inert but they are deemed a very low contamination risk.	A flooding and drainage survey has been conducted by a fully qualified engineer. Doc Ref: 'HES Drainage and FRA' The site has been engineered so that all spillages and contaminated surface waters are contained. However, the perimeter walls can be un-bunged to allow the flow of flood waters, if necessary.	1	1	1
Flooding of site	Langmead and Weston SSSI to the South of the site	Flood waters	Waste or contaminated waster washed off-site may: *Pollute watercourses and cause harm to fish, plants and invertebrate living in the water. *Harm wildlife when drinking polluted water , ingesting waste or smothering habitat.	3	3	9	The likelihood is a medium risk because the site drains naturally towards the SSSI, however, this is balanced out by the water having to travel 50m across fields planted with crops before travelling through a 5 metre thick hedgerow and then across a road before it reaches the SSSI. The likely consequence is medium as the predomiant waste type is inert. Although acknowlegemt is given to soil potentially adding suspended soilds to water courses. Wood and green waste is not inert and could cause blockages in the watercourses but is deemed to have a low contamination risk.	A flooding and drainage survey has been conducted by a fully qualified engineer. Doc Ref: 'HES Drainage and FRA' The site has been engineered so that all spillages and contaminated surface waters are contained. However, the perimeter walls can be un-bunged to allow the flow of flood waters, if necessary.	1	3	3
Flooding of site	Pigditch Rhyne Network and Weston Level Local Wildlife site to the South of the Site	Flood waters	Waste or contaminated waster washed off-site may: *Pollute watercourses and cause harm to fish, plants and invertebrate living in the water. *Harm wildlife when drinking polluted water , ingesting waste or smothering habitat.	3	3	9	The likelihood is a medium risk because the site drains naturally towards the rhyne network, however, this is balanced out by the water having to travel 50m across fields planted with crops before travelling through a 5 metre thick hedgerow and then across a road and a furhter 600m across grassland before it reaches the SSSI. The likely consequence is medium as the predomiant waste type is inert. Although acknowlegemt is given to soil potentially adding suspended soilds to water courses. Wood and green waste is not inert and could cause blockages in the watercourses but is deemed to have a low contamination risk to ground and water.	A flooding and drainage survey has been conducted by a fully qualified engineer. Doc Ref: 'HES Drainage and FRA' The site has been engineered so that all spillages and contaminated surface waters are contained. However, the perimeter walls can be un-bunged to allow the flow of flood waters, if necessary.	1	3	3
Flooding of site	Lang Moor wildlife site to the North-West of the site	Flood waters	Waste or contaminated waster washed off-site may: *Pollute watercourses and cause harm to fish, plants and invertebrate living in the water. *Harm wildlife when drinking polluted water , ingesting waste or smothering habitat.	1	1	1	The likelihood is low as the site drains in a Noth-site direction, away from Lang Moor. The water system around the site is not connected to Lang moor. The consequnce is low as by the time any flood water reached Lang Moor (2km) away, solids would have had a good time to settle out.	A flooding and drainage survey has been conducted by a fully qualified engineer. Doc Ref: 'HES Drainage and FRA' The site has been engineered so that all spillages and contaminated surface waters are contained. However, the perimeter walls can be un-bunged to allow the flow of flood waters, if necessary.	1	1	1
Flooding of site	Greylake RSPB reserve to North-East of the site.	Flood waters	Waste or contaminated waster washed off-site may: *Pollute watercourses and cause harm to fish, plants and invertebrate living in the water. *Harm wildlife when drinking polluted water , ingesting waste or smothering habitat.	1	1	1	The likelihood is low as the site drains in a Noth-site direction, away from Lang Moor. The water system around the site is not connected to Lang moor. The consequnce is low as by the time any flood water reached Lang Moor (2km) away, solids would have had a good time to settle out.	A flooding and drainage survey has been conducted by a fully qualified engineer. Doc Ref: 'HES Drainage and FRA' The site has been engineered so that all spillages and contaminated surface waters are contained. However, the perimeter walls can be un-bunged to allow the flow of flood waters, if necessary.	1	1	1
All on-site hazards: Wastes; machinery; vehicles	Local human population and / or livestock from adjacent fields after gaining unauthorised access to the site / waste operation	Direct physical contact	Bodily injury or death.	2	4	8	The likelihood is low as the site will be secured on all sides by either a gate or a 3.5 metre high wall. The consequnce is high as a likely consequnce of a person coming into contact with haeavy machinery or behicles, is death.	The site is secured on all sides as can be seen on plan ref: 41121_70482_180608_Towens of Weston_Site Plan'. Towens have risk assessments, safe systems of work and methoid statements in place to cover all activities.	1	4	4

Arson or accidental fire	local human population - Bungalow to the North of the site	Air transport of smoke and particulates. Spillages and contaminated fire water run-off to surface water, groundwater or direct into garden / property.	Respiratory irritation and illness. Nuisance. Damage to / contamination of garden / property.	3	3	9	The likelihood is medium as an Arson attack is unpredictable. Accidental fires are unlikely as there are not many sources of ignition present on the site. Self combustion of material has been deemed a moderate risk. The prevailing wind direction is away from the bungalow. The site drains away from the bungalow. The consequence is medium risk as the residents in the bungalow have doors and windows that can be sealed. The property has separate access and so residents can leave in vehicles if needs be.	The site is secured on all sides as can be seen on plan ref: 41121_70482_180608_Towens of Weston_Site Plan'. All sources of ignition, combustible waste, site layout, fire fighting strategies etc have been considered as part of the Fire Prevention Plan for Westonzoyland, Doc Ref:'FPP.WZ.2018'. A drainage system is in place with sealed drainage in the operating area and drainage that canb e quickly shut off for the rest of the site, details in the flood and draingage plan, Doc Ref: 'HES Drainage and FRA'.	1	3	3
Arson or accidental fire	local human population - Caravan park to the South-East of the site	Air transport of smoke and particulates. Spillages and contaminated fire water run-off to surface water, groundwater or direct into garden / property.	Respiratory irritation and illness. Nuisance. Damage to / contamination of garden / property.	3	3	9	The likelihood is medium as an Arson attack is unpredictable. Accidental fires are unlikely as there are not many sources of ignition present on the site. Self combustion of material has been deemed a moderate risk. The prevailing wind direction is away from the caravan park. The site drains away from the caravan park. The consequence is medium risk as the residents in the caravans have doors and windows that can be sealed. The property has separate access and so residents can leave in vehicles if needs be.	The site is secured on all sides as can be seen on plan ref: 41121_70482_180608_Towens of Weston_Site Plan'. All sources of ignition, combustible waste, site layout, fire fighting strategies etc have been considered as part of the Fire Prevention Plan for Westonzoyland, Doc Ref:'FPP.WZ.2018'. A drainage system is in place with sealed drainage in the operating area and drainage that canb e quickly shut off for the rest of the site, details in the flood and draingage plan, Doc Ref: 'HES Drainage and FRA'.	1	3	3
Arson or accidental fire	local human population - Westonzoyland village to the West of the site	Air transport of smoke and particulates. Spillages and contaminated fire water run-off to surface water, groundwater or direct into garden / property.	Respiratory irritation and illness. Nuisance. Damage to / contamination of garden / property.	3	3	9	The likelihood is medium as an Arson attack is unpredictable. Accidental fires are unlikely as there are not many sources of ignition present on the site. Self combustion of material has been deemed a moderate risk. The prevailing wind direction is away from the village. The site drains away from the village. The consequence is medium risk as the residents in the caravans have doors and windows that can be sealed. The village has separate access and so residents can leave in vehicles if needs be.	The site is secured on all sides as can be seen on plan ref: 41121_70482_180608_Towens of Weston_Site Plan'. All sources of ignition, combustible waste, site layout, fire fighting strategies etc have been considered as part of the Fire Prevention Plan for Westonzoyland, Doc Ref:'FPP.WZ.2018'. A drainage system is in place with sealed drainage in the operating area and drainage that canb e quickly shut off for the rest of the site, details in the flood and draingage plan, Doc Ref: 'HES Drainage and FRA'.	1	3	3
Arson or accidental fire	local human population - industrial estate users and workers to the North and East of the site.	Air transport of smoke and particulates. Spillages and contaminated fire water run-off to surface water, groundwater or direct into garden / property.	Respiratory irritation and illness. Nuisance. Damage to / contamination of workplace.	3	4	12	The likelihood is medium as an Arson attack is unpredictable. Accidental fires are unlikely as there are not many sources of ignition present on the site. Self combustion of material has been deemed a moderate risk. The prevailing wind direction is towards the industrial units. The site drains away from the industrial units. The consequence is high risk as some of the occupiers of the industrial estate work outside and may have to leave work / close for the day.	The site is secured on all sides as can be seen on plan ref: 41121_70482_180608_Towens of Weston_Site Plan'. All sources of ignition, combustible waste, site layout, fire fighting strategies etc have been considered as part of the Fire Prevention Plan for Westonzoyland, Doc Ref:'FPP.WZ.2018'. A drainage system is in place with sealed drainage in the operating area and drainage that canb e quickly shut off for the rest of the site, details in the flood and draingage plan, Doc Ref: 'HES Drainage and FRA'.	1	4	4
Arson or accidental fire	local human population - road users of the A372 to the North of the site.	Air transport of smoke and particulates.	Respiratory irritation / illness. Reduced visibility leading to road traffic accident. Nuisance of road closure.	2	4	12	The likelihood is low risk as there would need to be a considerable amount of smoke to affect the road. There is no waste onsite that would cause thick black smoke. The wind is in the direction of the road. The site drains away from the road. The consequnce is high as a road closure would have a big impact on the local community and if thick smoke does carry across the road it could cause a road traffic accident.	The site is secured on all sides as can be seen on plan ref: 41121_70482_180608_Towens of Weston_Site Plan'. All sources of ignition, combustible waste, site layout, fire fighting strategies etc have been considered as part of the Fire Prevention Plan for Westonzoyland, Doc Ref:'FPP.WZ.2018'. A drainage system is in place with sealed drainage in the operating area and drainage that canb e quickly shut off for the rest of the site, details in the flood and draingage plan, Doc Ref: 'HES Drainage and FRA'.	1	4	4
Arson or accidental fire	local human population using area for receational purposes e.g. fishing, walking.	Air transport of smoke and particulates.	Respiratory irritation / illness. Loss of amenity. Damage to fish stock by water contamination / pollution.	3	2	6	The likelihood is medium as although as a recreational user is unlikely to walk into or towards a plume of smoke, the run off from site is in the direction of a SSSI containing watercourses. The consequence is low risk as the time spent by a recreational user in the smoke is unlikely to have a big consequnce.	The site is secured on all sides as can be seen on plan ref: 41121_70482_180608_Towens of Weston_Site Plan'. All sources of ignition, combustible waste, site layout, fire fighting strategies etc have been considered as part of the Fire Prevention Plan for Westonzoyland, Doc Ref:'FPP.WZ.2018'. A drainage system is in place with sealed drainage in the operating area and drainage that canb e quickly shut off for the rest of the site, details in the flood and draingage plan, Doc Ref: 'HES Drainage and FRA'.	2	2	4
Arson or accidental fire	Langmead and Weston SSSI to the South of the site	Air transport of smoke and particulates. Spillages and contaminated fire water run-off to surface water, groundwater or direct SSSI	Smothering of flora by particulates. Damage to habitat if fire spreads. Pollution of watercourses causing detriment to fish, plants and invertebrates living in the water and damage to the wildlife that depends on the water and the things living in it.	3	4	12	The likelihood is medium as as Arson attach is unpredictable. Accidental fires are unlikley as ther are not many sources of ignition present on the site. Self combustion of material has been deemed a moderate risk. The prevaililng wind is away from the SSSI. The site run-off is towards the SSSI, though the run-off would have to go over 50m of field planted with crops, through a 5m thick hedgerow, and axross a road before it reaches the SSSI. The consequnce of contaminated run-off entering a rhyne system could be catastrophic for fish and invertebrate. Wildlife may be affectred by consuiming contaminated water.	The site is secured on all sides as can be seen on plan ref: 41121_70482_180608_Towens of Weston_Site Plan'. All sources of ignition, combustible waste, site layout, fire fighting strategies etc have been considered as part of the Fire Prevention Plan for Westonzoyland, Doc Ref:'FPP.WZ.2018'. A drainage system is in place with sealed drainage in the operating area and drainage that canb e quickly shut off for the rest of the site, details in the flood and draingage plan, Doc Ref: 'HES Drainage and FRA'.	1	4	4
Arson or accidental fire	Pigditch Rhyne Network and Weston Level Local Wildlife site to the South of the Site	Air transport of smoke and particulates. Spillages and contaminated fire water run-off to surface water, groundwater or direct SSSI	Smothering of flora by particulates. Damage to habitat if fire spreads. Pollution of watercourses causing detriment to fish, plants and invertebrates living in the water and damage to the wildlife that depends on the water and the things living in it.	2	4	8	The likelihood is medium as as Arson attach is unpredictable. Accidental fires are unlikley as ther are not many sources of ignition present on the site. Self combustion of material has been deemed a moderate risk. The prevaililng wind is away from the SSSI. The site run-off is towards the SSSI, though the run-off would have to go over 50m of field planted with crops, through a 5m thick hedgerow, across 2 roads and 600m of grassland before ross a road before it reaches Pigditch wildlife site. The consequnce of contaminated run-off entering a rhyne system could be catastrophic for fish and invertebrate. Wildlife may be affectred by consuiming contaminated water.	The site is secured on all sides as can be seen on plan ref: 41121_70482_180608_Towens of Weston_Site Plan'. All sources of ignition, combustible waste, site layout, fire fighting strategies etc have been considered as part of the Fire Prevention Plan for Westonzoyland, Doc Ref:'FPP.WZ.2018'. A drainage system is in place with sealed drainage in the operating area and drainage that canb e quickly shut off for the rest of the site, details in the flood and draingage plan, Doc Ref: 'HES Drainage and FRA'.	1	4	4

Arson or accidental fire	Lang Moor wildlife site to the North-West of the site	Air transport of smoke and particulates. Spillages and contaminated fire water run-off to surface water, groundwater or direct to wildlife site.	Smothering of flora by particulates. Damage to habitat if fire spreads. Pollution of watercourses causing detriment to fish, plants and invertebrates living in the water and damage to the wildlife that depends on the water and the things living in it.	1	4	4	The likelihood of Langmoor being affected is low as it is nearly 2km away, most particulates would have fallen from the plume before reaching Langmoor. Run off is virtually impossible as it is in the opposite direction of site run-off and is part of a seapate water network. The consequnce isfcontaminated run-off did reach Langmoor could be catastrophic for fish and invertebrate. Wildlife may be affectred by consuiming contaminated water	The site is secured on all sides as can be seen on plan ref: 41121_70482_180608_Towens of Weston_Site Plan'. All sources of ignition, combustible waste, site layout, fire fighting strategies etc have been considered as part of the Fire Prevention Plan for Westonzoyland, Doc Ref:'FPP.WZ.2018'. A drainage system is in place with sealed drainage in the operating area and drainage that canb e quickly shut off for the rest of the site, details in the flood and draingage plan, Doc Ref: 'HES Drainage and FRA'.	1	4	6
Arson or accidental fire	Greylake RSPB reserve to North-East of the site.	Air transport of smoke and particulates. Spillages and contaminated fire water run-off to surface water, groundwater or direct to RSPB Reserve	Smothering of flora by particulates. Damage to habitat if fire spreads. Pollution of watercourses causing detriment to fish, plants and invertebrates living in the water and damage to the wildlife that depends on the water and the things living in it.	1	4	4	The likelihood of Greylake being affected is low as it is nearly 2km away, most particulates would have fallen from the plume before reaching Langmoor. Run off is virtually impossible as it is in the opposite direction of site run-off and is part of a seapate water network. The consequnce if contaminated run-off did reach Greylake could be catastrophic for fish and invertebrate. Wildlife may be affectred by consuiming contaminated water	The site is secured on all sides as can be seen on plan ref: 41121_70482_180608_Towens of Weston_Site Plan'. All sources of ignition, combustible waste, site layout, fire fighting strategies etc have been considered as part of the Fire Prevention Plan for Westonzoyland, Doc Ref:'FPP.WZ.2018'. A drainage system is in place with sealed drainage in the operating area and drainage that canb e quickly shut off for the rest of the site, details in the flood and draingage plan, Doc Ref: 'HES Drainage and FRA'.	1	4	4
Arson or accidental fire	Kings Sedgemoor SSSI	Air transport of smoke and particulates. Spillages and contaminated fire water run-off to surface water, groundwater or direct to SSSI	Smothering of flora by particulates. Damage to habitat if fire spreads. Pollution of watercourses causing detriment to fish, plants and invertebrates living in the water and damage to the wildlife that depends on the water and the things living in it.	1	4	4	The likelihood of Kings Sedgemoor being affected is low as it is nearly 2km away, most particulates would have fallen from the plume before reaching Langmoor. Run off is virtually impossible as it is in the opposite direction of site run-off and is part of a seapate water network. The consequnce if contaminated run-off did reach Kings Sedgemoor could be catastrophic for fish and invertebrate. Wildlife may be affectred by consuiming contaminated water	The site is secured on all sides as can be seen on plan ref: 41121_70482_180608_Towens of Weston_Site Plan'. All sources of ignition, combustible waste, site layout, fire fighting strategies etc have been considered as part of the Fire Prevention Plan for Westonzoyland, Doc Ref:'FPP.WZ.2018'. A drainage system is in place with sealed drainage in the operating area and drainage that canb e quickly shut off for the rest of the site, details in the flood and draingage plan, Doc Ref: 'HES Drainage and FRA'.	1	4	4
Arson or accidental fire	Downstream water abstraction points	Spillages and contaminated fire water run-off to surface water, groundwater	Closure of boreholes. Irritation / Ilness to people and agricultural animals by ingesting contaminated water. Damage to crops by reducing acess to clean water. Crops may not be viable if contaminated with polluted water.	1	4	4	The likelihood is low as there are no downstream abstraction points recorded. If there were then the consequnce would be high due to potential ill health effects and residues left on crops.	The site is secured on all sides as can be seen on plan ref: 41121_70482_180608_Towens of Weston_Site Plan'. All sources of ignition, combustible waste, site layout, fire fighting strategies etc have been considered as part of the Fire Prevention Plan for Westonzoyland, Doc Ref:'FPP.WZ.2018'. A drainage system is in place with sealed drainage in the operating area and drainage that canb e quickly shut off for the rest of the site, details in the flood and draingage plan, Doc Ref: 'HES Drainage and FRA'. Boreholes, abstractions, ground and surface water have all been identified in the Site Condition Report, Doc Ref: 'SCR.WZ.18' and full information is contained in Appendix D of the Site Condition Report in the form of a Landmark EnviroCheck report.	1	4	4
Arson or accidental fire	Groundwater	Spillaged and contaminated fire water run-off soaking onto ground.	Contaminated boreholes. Pollutiopn / closure of underground aquifer/s.	1	4	4	The site is not over an potable water supplu aquifer and there are no records of boreholes.	41121_70482_180608_Towens of Weston_Site Plan'. All sources of ignition, combustible waste, site layout, fire fighting strategies etc have been considered as part of the Fire Prevention Plan for Westonzoyland, Doc Ref:'FPP.WZ.2018'. A drainage system is in place with sealed drainage in the operating area and drainage that canb e quickly shut off for the rest of the site, details in the flood and draingage plan, Doc Ref: 'HES Drainage and FRA'. Boreholes, abstractions, ground and surface water have all been identified in the Site Condition Report, Doc Ref: 'SCR.WZ.18' and full information is contained in Appendix D of the Site Condition Report in the form of a Landmark EnviroCheck report.	1	4	4
Arson or accidental fire	Staff and firefighters	Air transport of smoke and particulates. Direct contact with flames / heat.	Bodily injury or death by direct contact with flames. Respiratory irritation / illness by inhaling smoke and particulates.	1	5	5	The likelihood is low as Towens' staff operate in accordance with a written management system, which includes how to prevent and deal with fires. Firefighters are fully trained and wear the correct PPE, including breathing appratus. If a person did come into contact with naked flames or heavy smoke, the consequence wouldbe high.	The site is secured on all sides as can be seen on plan ref: 41121_70482_180608_Towens of Weston_Site Plan'. All sources of ignition, combustible waste, site layout, fire fighting strategies etc have been considered as part of the Fire Prevention Plan for Westonzoyland, Doc Ref:'FPP.WZ.2018'. A drainage system is in place with sealed drainage in the operating area and drainage that canb e quickly shut off for the rest of the site, details in the flood and draingage plan, Doc Ref: 'HES Drainage and FRA'.	1	5	5
Spillage of liquids on site, leachate from waste, contaminated rainwater run-off	local human population - Bungalow to the North of the site	Direct run-off from site	Contamination of garden Harm to pets / wildlife	1	1	1	The likelihood is low as the site drains away from the bungalow. The site is covered in imperable surface. Waste types are all solid. Green waste is not kept long enough to produce leachate. A small fuel tank is kept on-site but is fully bunded. Operations only take place within a sealed drainage area. The consequnce is low as no hazardous waste is permitted to site.	Vehicles all carry spill kits. Drainage survey carried out and operating area connected to sealed drainage. The rest of the site drains to an open ditch, which has check dams that can be closed if there is a spill. Doc Ref: 'HES Drainage and FRA'. All surfaces are impermeable. Spill kits kept on-site./ Environment Management system in place containing procedures on how to deal with spills.	1	1	1
Spillage of liquids on site, leachate from waste, contaminated rainwater run-off	local human population - Caravan park to the South-East of the site	Direct run-off from site	Contamination of gardens Harm to pets / wildlife	1	1	1	The likelihood is low as the site drains away from the caravans. The site is covered in imperable surface. Waste types are all solid. Green waste is not kept long enough to produce leachate. A small fuel tank is kept on-site but is fully bunded. The consequnce is low as no hazardous waste is permitted to site.	Vehicles all carry spill kits. Drainage survey carried out and operating area connected to sealed drainage. The rest of the site drains to an open ditch, which has check dams that can be closed if there is a spill. Doc Ref: 'HES Drainage and FRA'. All surfaces are impermeable. Spill kits kept on-site./ Environment Management system in place containing procedures on how to deal with spills.	1	1	1

Spillage of liquids on site, leachate from waste, contaminated rainwater run-off	local human population - Westonzoyland village to the West of the site	Direct run-off from site	Contamination of gardens Harm to pets / wildlife / agricultural animals	1	1	1	The likelihood is low as the site drains away from the caravans. The site is covered in imperable surface. Waste types are all solid. Green waste is not kept long enough to produce leachate. A small fuel tank is kept on-site but is fully bunded. The consequnce is low as no hazardous waste is permitted to site.	Vehicles all carry spill kits. Drainage survey carried out and operating area connected to sealed drainage. The rest of the site drains to an open ditch, which has check dams that can be closed if there is a spill. Doc Ref: 'HES Drainage and FRA'. All surfaces are impermeable. Spill kits kept on-site./ Environment Management system in place containing procedures on how to deal with spills.	1	1	1
Spillage of liquids on site, leachate from waste, contaminated rainwater run-off	local human population - industrial estate users and workers to the North and East of the site.	Direct run-off from site	Contamination of work area	1	1	1	The likelihood is low as the site drains away from the industrial estate. The site is covered in imperable surface. Waste types are all solid. Green waste is not kept long enough to produce leachate. A small fuel tank is kept on-site but is fully bunded. The consequnce is low as no hazardous waste is permitted to site.	Vehicles all carry spill kits. Drainage survey carried out and operating area connected to sealed drainage. The rest of the site drains to an open ditch, which has check dams that can be closed if there is a spill. Doc Ref: 'HES Drainage and FRA'. All surfaces are impermeable. Spill kits kept on-site./ Environment Management system in place containing procedures on how to deal with spills.	1	1	1
Spillage of liquids on site, leachate from waste, contaminated rainwater run-off	local human population - road users of the A372 to the North of the site.	Direct run-off from site	May make road surface slippery leading to road traffic accident/s.	2	4	8	The likelihood is low but it is possible that a vehicle arriving / leaving the site may have a fuel spill. The consequnce is high as fuel on the road can cause cars to skid leading to a road traffic accident. The fuel may also enter the drainage system via road gulilies.	Vehicles all carry spill kits. Drainage survey carried out and operating area connected to sealed drainage. The rest of the site drains to an open ditch, which has check dams that can be closed if there is a spill. Doc Ref: 'HES Drainage and FRA'. All surfaces are impermeable. Spill kits kept on-site./ Environment Management system in place containing	1	4	4
Spillage of liquids on site, leachate from waste, contaminated rainwater run-off	Langmead and Weston SSSI to the South of the site	Direct run-off from site or via surface drains or surface water.	Harm to wildlife by ingestion. Harm to water by oxygen depletion, fish and invertebrate kills, smothering, light reduction and algal blooms	3	4	12	The likelihood is medium as the site run-off is towards the SSSI, though the run-off would have to go over 50m of field planted with crops, through a 5m thick hedgerow, and axross a road before it reaches the SSSI. The consequnce of contaminated run-off entering a rhyne system could be catastrophic for fish and invertebrate. Wildlife may be affectred by consuiming contaminated water.	All surfaces are impermeable. Operations only occur in an area served by seladed drainage. One small fuel tank on-site is fully bunded. An impermeable permiter concrete wall will be in place which has drainage holes that can be bunged. All other run-off goes to an open ditch which has check dams that can be closed in the case of spillage reaching the ditch, in accordance with the drainage survey carried out, Doc Ref: 'HES Drainage and FRA'. All vehicles carry spill kits. Spill kits kept on-site. Towens staff are fully trainined and operate in accordance with a documented Environment Management System.	1	4	4
Spillage of liquids on site, leachate from waste, contaminated rainwater run-off	Pigditch Rhyne Network and Weston Level Local Wildlife site to the South of the Site	Direct run-off from site or via surface drains or surface water.	Harm to wildlife by ingestion. Harm to water by oxygen depletion, fish and invertebrate kills, smothering, light reduction and algal blooms	2	4	8	The likelihood is medium as the site run-off is towards the SSSI, though the run-off would have to go over 50m of field planted with crops, through a 5m thick hedgerow, across 2 roads and 600m of grassland before ross a road before it reaches Pigditch wildlife site. The consequnce of contaminated run-off entering a rhyne system could be catastrophic for fish and invertebrate. Wildlife may be affectred by consuiming contaminated water.	All surfaces are impermeable. Operations only occur in an area served by seladed drainage. One small fuel tank on-site is fully bunded. An impermeable permiter concrete wall will be in place which has drainage holes that can be bunged. All other run-off goes to an open ditch which has check dams that can be closed in the case of spillage reaching the ditch, in accordance with the drainage survey carried out, Doc Ref: 'HES Drainage and FRA'. All vehicles carry spill kits. Spill kits kept on-site. Towens staff are fully trainined and operate in accordance with a documented Environment Management System.	1	4	4
Spillage of liquids on site, leachate from waste, contaminated rainwater run-off	Lang Moor wildlife site to the North-West of the site	Direct run-off from site or via surface drains or surface water.	Harm to wildlife by ingestion. Harm to water by oxygen depletion, fish and invertebrate kills, smothering, light reduction and algal blooms	1	4	4	The likelihood of Langmoor being affected is low as it is nearly 2km away and run off is virtually impossible as it is in the opposite direction of site run-off and is part of a seapate water network. The consequnce isfcontaminated run-off did reach Langmoor could be catastrophic for fish and invertebrate. Wildlife may be affectred by consuiming contaminated water	All surfaces are impermeable. Operations only occur in an area served by seladed drainage. One small fuel tank on-site is fully bunded. An impermeable permiter concrete wall will be in place which has drainage holes that can be bunged. All other run-off goes to an open ditch which has check dams that can be closed in the case of spillage reaching the ditch, in accordance with the drainage survey carried out, Doc Ref: 'HES Drainage and FRA'. All vehicles carry spill kits. Spill kits kept on-site. Towens staff are fully trainined and operate in accordance with a documented Environment Management System.	1	4	4
Spillage of liquids on site, leachate from waste, contaminated rainwater run-off	Greylake RSPB reserve to North-East of the site.	Direct run-off from site or via surface drains or surface water.	Harm to wildlife by ingestion. Harm to water by oxygen depletion, fish and invertebrate kills, smothering, light reduction and algal blooms	1	4	4	The likelihood of Greylake being affected is low as it is nearly 2km away and run off is virtually impossible as it is in the opposite direction of site run-off and is part of a seapate water network. The consequnce isfcontaminated run-off did reach Langmoor could be catastrophic for fish and invertebrate. Wildlife may be affectred by consuiming contaminated water	All surfaces are impermeable. Operations only occur in an area served by seladed drainage. One small fuel tank on-site is fully bunded. An impermeable permiter concrete wall will be in place which has drainage holes that can be bunged. All other run-off goes to an open ditch which has check dams that can be closed in the case of spillage reaching the ditch, in accordance with the drainage survey carried out, Doc Ref: 'HES Drainage and FRA'. All vehicles carry spill kits. Spill kits kept on-site. Towens staff are fully trainined and operate in accordance with a documented Environment Management System.	1	4	4
Spillage of liquids on site, leachate from waste, contaminated rainwater run-off	Kings Sedgemoor Drain SSSI	Direct run-off from site or via surface drains or surface water.	Harm to wildlife by ingestion. Harm to water by oxygen depletion, fish and invertebrate kills, smothering, light reduction and algal blooms	1	4	4	The likelihood of Kings Sedgemoor being affected is low as it is nearly 2km away and run off is virtually impossible as it is in the opposite direction of site run-off and is part of a seapate water network. The consequnce isfcontaminated run-off did reach Langmoor could be catastrophic for fish and invertebrate. Wildlife may be affectred by consuiming contaminated water	All surfaces are impermeable. Operations only occur in an area served by seladed drainage. One small fuel tank on-site is fully bunded. An impermeable permiter concrete wall will be in place which has drainage holes that can be bunged. All other run-off goes to an open ditch which has check dams that can be closed in the case of spillage reaching the ditch, in accordance with the drainage survey carried out, Doc Ref: 'HES Drainage and FRA'. All vehicles carry spill kits. Spill kits kept on-site. Towens staff are fully trainined and operate in accordance with a documented Environment Management System.	1	4	4

Spillage of liquids on site, leachate from waste, contaminated rainwater run-off	Downstream water abstraction points	Direct run-off from site or via surface drains or surface water.	Closure of boreholes. Irritation / Illness to people and agricultural animals by ingesting contaminated water. Damage to crops by reducing acess to clean water. Crops may not be viable if contaminated with polluted water.	1	4	4	The likelihood is low as there are no downstream abstraction points recorded. If there were then the consequnce would be high due to potential ill health effects and residues left on crops.	All surfaces are impermeable. Operations only occur in an area served by seladed drainage. One small fuel tank on-site is fully bunded. An impermeable permiter concrete wall will be in place which has drainage holes that can be bunged. All other run-off goes to an open ditch which has check dams that can be closed in the case of spillage reaching the ditch, in accordance with the drainage survey carried out, Doc Ref: 'HES Drainage and FRA'. All vehicles carry spill kits. Spill kits kept on-site. Towens staff are fully trainined and operate in accordance with a documented Environment Management System.	1	4	4
Spillage of liquids on site, leachate from waste, contaminated rainwater run-off	Groundwater	Soaking into ground	Contaminated boreholes. Pollution / closure of underground aquifer/s.	1	4	4	The site is not over an potable water supply aquifer and there are no records of boreholes.	All surfaces are impermeable. Operations only occur in an area served by seladed drainage. One small fuel tank on-site is fully bunded. An impermeable permiter concrete wall will be in place which has drainage holes that can be bunged. All other run-off goes to an open ditch which has check dams that can be closed in the case of spillage reaching the ditch, in accordance with the drainage survey carried out, Doc Ref: 'HES Drainage and FRA'. All vehicles carry spill kits. Spill kits kept on-site. Towens staff are fully trainined and operate in accordance with a documented Environment Management System.	1	4	4
Odour	local human population - Bungalow to the North of the site	Airbourne then inhalation.	Nuisance. Loss of amenity.	1	2	2	The likelihood is low. The only permitted waste type with the potential to cause odour is green waste, if it is composted. Unprocessed green waste (aerobic) will be on-site for no more than a week. Processed (anaerobic) will be on-site for no more than a week. It is well documented that compost takes more than a week in anaerobic conditions to cause an odour. The consequnece is low as odour is a nuisance but not a helath risk. It would also be transient as the green waste is moved off-site at least once per week.	Checking for odour forms part of the information that needs to be recorded in the daily site diary, which forms part of the overall EMS. Site diary ref: SSF031 EMS Ref: SWP019	1	2	2
Odour	local human population - Caravan park to the South-East of the site	Airbourne then inhalation.	Nuisance. Loss of amenity.	1	2	2	The likelihood is low. The only permitted waste type with the potential to cause odour is green waste, if it is composted. Unprocessed green waste (aerobic) will be on-site for no more than a week. Processed (anaerobic) will be on-site for no more than a week. It is well documented that compost takes more than a week in anaerobic conditions to cause an odour. The consequnece is low as odour is a nuisance but not a helath risk. It would also be transient as the green waste is moved off-site at least once per week.	Checking for odour forms part of the information that needs to be recorded in the daily site diary, which forms part of the overall EMS. Site diary ref: SSF031 EMS Ref: SWP019	1	2	2
Odour	local human population - Westonzoyland village to the West of the site	Airbourne then inhalation.	Nuisance. Loss of amenity.	1	2	2	The likelihood is low. The only permitted waste type with the potential to cause odour is green waste, if it is composted. Unprocessed green waste (aerobic) will be on-site for no more than a week. Processed (anaerobic) will be on-site for no more than a week. It is well documented that compost takes more than a week in anaerobic conditions to cause an odour. The consequnece is low as odour is a nuisance but not a helath risk. It would also be transient as the green waste is moved off-site at least once per week.	Checking for odour forms part of the information that needs to be recorded in the daily site diary, which forms part of the overall EMS. Site diary ref: SSF031 EMS Ref: SWP019	1	2	2
Odour	local human population - industrial estate users and workers to the North and East of the site.	Airbourne then inhalation.	Nuisance. Loss of amenity.	1	2	2	The likelihood is low. The only permitted waste type with the potential to cause odour is green waste, if it is composted. Unprocessed green waste (aerobic) will be on-site for no more than a week. Processed (anaerobic) will be on-site for no more than a week. It is well documented that compost takes more than a week in anaerobic conditions to cause an odour. The consequnece is low as odour is a nuisance but not a helath risk. It would also be transient as the green waste is moved off-site at least once per week.	Checking for odour forms part of the information that needs to be recorded in the daily site diary, which forms part of the overall EMS. Site diary ref: SSF031 EMS Ref: SWP019	1	2	2
Odour	local human population using area for receational purposes e.g. fishing, walking.	Airbourne then inhalation.	Nuisance. Loss of amenity.	1	1	1	The likelihood is low. The only permitted waste type with the potential to cause odour is green waste, if it is composted. Unprocessed green waste (aerobic) will be on-site for no more than a week. Processed (anaerobic) will be on-site for no more than a week. It is well documented that compost takes more than a week in anaerobic conditions to cause an odour. The consequnece is low as odour is a nuisance but not a helath risk. It would also be transient as the green waste is moved off-site at least once per week.	Checking for odour forms part of the information that needs to be recorded in the daily site diary, which forms part of the overall EMS. Site diary ref: SSF031 EMS Ref: SWP019	1	1	1