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# Marine Licence Application for Construction Projects 

Version 1.0

Marine (Scotland) Act 2010

## Acronyms

Please note the following acronyms referred to in this application form:

| BPEO | Best Practicable Environmental Option |
| :--- | :--- |
| EIA | Environmental Impact Assessment |
| ES | Environmental Statement |
| MHWS | Mean High Water Springs |
| MMO | Marine Mammal Observer |
| MPA | Marine Protected Area |
| MS-LOT | Marine Scotland - Licensing Operations Team |
| PAM | Passive Acoustic Monitoring |
| SAC | Special Area of Conservation |
| SNH | Scottish Natural Heritage |
| SPA | Special Protection Area |
| SSSI | Site of Special Scientific Interest |
| WGS84 | World Geodetic System 1984 |

## Explanatory Notes

The following numbered paragraphs correspond to the questions on the application form and are intended to assist in completing the form. These explanatory notes are specific to this application and so you are advised to read these in conjunction with the Marine Scotland Guidance for Marine Licence Applicants document.

## 1. Applicant Details

The person making the application who will be named as the licensee.

## 2. Agent Details

Any person acting under contract (or other agreement) on behalf of any party listed as the applicant and having responsibility for the control, management or physical deposit or removal of any substance(s) or object(s).

## 3. Payment

Indicate payment method. Cheques must be made payable to: The Scottish Government.

## Marine licence applications will not be accepted unless accompanied by a cheque for the correct application fee, or if an invoice is requested, until that invoice is settled. Target timelines for determining applications do not begin until the application fee is paid.

## 4. Application Type

Indicate if the application is for a new construction site or an existing construction site. Provide the existing or previous consent/licence number and expiry date if applicable.

## 5. Project Details

(a) Give a brief description of the project (e.g. construction of a new sea outfall).
(b) Provide the total area of proposed works in square metres.
(c) Provide the proposed start date of the project. The start date will not be backdated, since to commence a project for which a licence has not been obtained will constitute an offence, which may result in appropriate legal action. A licence is normally valid for the duration of the project but not exceeding 3 years. If a project will not be completed before a marine licence lapses, it will be necessary for licence holders to re-apply for a further licence to continue any ongoing work at least 14 weeks prior to the expiry date of the licence. Target duration for determination of a marine licence application is 14 weeks.
(d) Provide the proposed completion date of the project.
(e) Provide the cost of the works seawards of the tidal limit of MHWS. This estimate should only cover
work taking place below the tidal level of MHWS and must take into consideration the cost of materials, labour fees etc.
(f) Describe the location of the proposed works. Include a list of the latitude and longitude co-ordinates (WGS84) of the boundary points of the proposed project. WGS84 is the World Geodetic System 1984 and the reference co-ordinate system used for marine licence applications. Co-ordinates taken from GPS equipment should be set to WGS84. Coordinates taken from recent admiralty charts will be on a WGS84 compatible datum. Ordnance survey maps do not use WGS84. In a few cases, (e.g. laying of long pipelines) it may only be practicable to supply co-ordinates for the start and end points.

Example: For positions read from charts the format should be as in the example: $55^{\circ} 55.555^{\prime} \mathrm{N}$ $002^{\circ} 22.222^{\prime}$ W (WGS84). The decimal point specifies that decimals of minutes are used and the datum is stated explicitly. If seconds are used then the format should be as in the example: $55^{\circ} 55^{\prime} 44^{\prime \prime} \mathrm{N}$ $2^{\circ} 22^{\prime} 11^{\prime \prime} \mathrm{W}$ (WGS84).

It is important that the correct positions, in the correct format, are included with this application, as any errors will result in the application being refused or delayed.

To supplement your application, please provide photographs of the project location and submit these with your application. Please also provide a suitably scaled extract of an Ordnance Survey Map (1:2,500 scale but not more than $1: 10,000$ ) or Admiralty Chart which must be marked to indicate:

- the full extent of the works in relation to the surrounding area;
- latitude and longitude co-ordinates defining the location of the works;
- the level of MHWS;
- any adjacent SAC, SPA, SSSI, MPA, Ramsar or similar conservation area boundary.

Drawings and plans will be consulted upon. If they are subject to copyright, it is the responsibility of the applicant to obtain necessary approvals to reproduce the documents and to submit suitably annotated copies with the application.

Sewer outfalls, discharge pipes for industrial waste etc. The size and description of the pipe must be shown on the longitudinal sections and also details of its supports, foundations, methods of jointing and details of any tidal flaps.

Bridges over tidal waters: An elevation with longitudinal and cross-sections of the bridge to a suitable scale must show the dimensions of the spans and width of piers, etc. above and below MHWS and the maximum and minimum heights of the undersides of the superstructures above MHWS. The headroom above MHWS and the width of span of the nearest bridges, if any, above and below the site must be stated.

Tunnels under tidal waters: The longitudinal section of the tunnel must show the distances between the bed of the river or estuary and the top of the tunnels. Cross-sections must show the internal and external dimensions of the tunnel and particulars of construction. When a proposed future dredging level is known this must also be shown on all sections.

Overhead cables: Catenary must be supplied in addition to the site plan showing the minimum clearance of the cable at MHWS and the electrical clearance allowed.
(g) Indicate if the project is located within the jurisdiction of a statutory harbour authority and provide details of the statutory harbour authority where relevant.
(h) Provide a full method statement, including schedule of works and the ultimate fate of the structure.
(i) Provide assessment of the potential impacts the works may have, including interference with other uses of the sea. Please include details of areas of concern e.g designated conservation areas, such as a SAC, SPA, SSSI, MPA or Ramsar site and shellfish harvesting areas. Further guidance on designated conservation areas can be obtained from SNH at this website:
http://gateway.snh.gov.uk/sitelink/index.isp and guidance on shellfish harvesting areas can be obtained from http://www.foodstandards.gov.scot/ with regards to the Shellfish Waters Directive (2006/113/EC) which has parameters set to protect the water quality in which edible shellfish are grown.

Applicants should also be aware of the need to pay due regard to coastal and marine archaeological matters and attention is drawn to Historic Scotland's Operational Policy Paper HP6, "Conserving the Underwater Heritage".

Any application for beach replenishment works must be cross checked as to whether the proposed site is a designated bathing water site. If so, all physical works should ideally be done outwith the Bathing Water Season ( $1^{\text {st }}$ June to $15^{\text {th }}$ September). Further guidance on the Bathing Waters Directive (2006/7/EC) can be obtained from http://apps.sepa.org.uk/bathingwaters/.

Where there are potential impacts from the works, please provide details of proposed mitigation, such as use of MMOs or PAM, in response to potential impacts.

## 6. Deposits and/or Removals

(a) Complete the table to indicate all permanent substances or objects to be deposited and/or removed from below MHWS. If you propose using types of substances or objects for which a specific box is not provided in the table, please describe the nature of such substances or objects in the box marked "other".
(b) Please indicate the method of delivery of any substance(s) or object(s) to be placed below MHWS.
(c) Where the proposed work involves salt marsh feeding, beach replenishment or land reclamation the description of the substances or objects must include details of its chemical quality. Where the substances or objects have not been chemically analysed, MS-LOT may request representative samples for analysis or require the applicant to arrange for analyses to be undertaken before the marine licence application can be determined.
(d) If temporary deposits are required, please provide details as with the permanent deposits above. The temporary deposit location details (Latitude and Longitude WGS84) must be added to the form, and the period of time the site will be used must be provided. If granting a licence, MS-LOT will include on the document details of any area that has been approved as a temporary deposit site.

## 7. Disposal of Dredged Substance(s) or Object(s) at Sea

(a) If you are proposing to dispose of any excess substance(s) or object(s) arising from the project at sea, a separate marine licence will be required (see Dredging and Sea Disposal application form). The granting of a marine licence for construction projects does not imply that a marine licence for sea disposal will also be granted as different assessment criteria are used to determine each type of application. If a separate application is being submitted for dredging and sea disposal then this must be accompanied with a BPEO report.
(b) Provide the quantity of dredged substance(s) or object(s) for sea disposal in wet tonnes.

## 8. Noise Monitoring

Under the Marine Strategy Regulations (2010), there is now a requirement to monitor loud, low to mid frequency ( 10 Hz to 10 kHz ) impulsive noise. Activities where this type of noise is produced include seismic airguns, other geophysical surveys ( $<10 \mathrm{kHz}$ ), pile driving, explosives and certain acoustic deterrent devices. Where noisy activity is being undertaken, you must complete an initial registration form for the noise registry which allows you to provide detalls on the proposed work. Completion of a 'close-out' form, which allows licensees to provide details of the actual dates and locations where the activities occurred, is also required within 12 weeks of the completion of the 'noisy' activity or, in the case of prolonged activities such as piling for harbour construction or wind farms, at quarterly intervals or after each phase of foundation installation.

These forms can be downloaded from:
http://www. scotland.gov.uk/Topics/marine/science/MSInteractive/Themes/noise-reduction
Marine licence applications will not be accepted until this form has been completed and submitted.

## 9. Statutory Consenting Powers

Please describe in the answer to this question what (if any) statutory responsibilities you (or your client) have to consent any aspect of the project.

## 10. Scotland's National Marine Plan

Scotland's National Marine Plan has been prepared in accordance with the EU Directive 2014/89/EU, which came into force in July 2014. The Directive introduces a framework for maritime spatial planning and aims to promote the sustainable development of marine areas and the sustainable use of marine resources. It also sets out a number of minimum requirements all of which have been addressed in this plan. In doing so, and in accordance with article 5(3) of the Directive, Marine Scotland have considered a wide range of sectoral uses and activities and have determined how these different objectives are reflected and weighted in the marine plan. Land-sea interactions have also been taken into account as part of the marine planning process. Any applicant for a marine licence should consider their proposals with reference to Scotland's National Marine Plan. A copy of Scotland's National Marine Plan can be found at: http://www.gov.scot/Publications/2015/03/6517/0

Indicate whether you have considered the project with reference to Scotland's National Marine Plan and provide details of considerations made with reference to the policies, including but not limited to General Policies 7 and 13 (GEN 7 and GEN 13), that have been considered. If you have not considered the project with reference to Scotland's National Marine Plan please provide an explanation.

## 11. Pre-Application Consultation

Certain activities will be subject to public pre-application consultation. Activities affected will be large projects with the potential for significant impacts on the environment, local communities and other legitimate uses of the sea. The new requirement will allow those local communities, environmental groups and other interested parties to comment on a proposed development in its early stages - before an application for a marine licence is submitted. Further information can be obtained from: http://www.scotland.gov.uk/Resource/0043/00439649.pdf

If applicable, please provide your pre-application consultation report with your application.
12. Consultation (other than carried out under pre-application consultation)

Provide details of all bodies consulted and give details of any consents issued including date of issue.

## 13. Environmental Assessment

(a) Under the Marine Works Environmental Impact Assessment (EIA) Regulations 2007, there may be a requirement for certain projects to undergo an EIA and produce an ES. If EIA is required, MS-LOT will not determine a marine licence application until the EIA consent decision in respect of the marine licence application has been reached. Please confirm if the project falls under Annex I or II of Directive 85/337/EEC: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011L0092\&from=EN in relation to the Marine Works (EIA) Regulations 2007.

## Marine licence applications for proposals which fall under the regulations will not be accepted unless a screening opinion has been issued in relation to this.

(b) Please indicate if an EIA has been undertaken and whether it was for the marine licence application to which this application relates or for any other EIA regulator (e.g local authority). Please attach any previous ES to the application.

MS-LOT will not determine a marine licence application until the EIA consent decision in respect of any regulated activity associated with the marine licence application has been reached.

## 14. Associated Works

Indicate whether the application is associated with any other marine projects (e.g. land reclamation, marine/harbour construction works, dredging and sea disposal etc). If this is the case, provide reference/licence number for the related marine projects.

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# Marine Licence Application for Construction Projects 

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## Marine (Scotland) Act 2010

It is the responsibility of the applicant to obtain any other consents or authorisations that may be required.

Under Section 54 of the Marine (Scotland) Act 2010, all information contained within and provided in support of this application will be placed on a Public Register. There are no national security grounds for application information not going on the Register under the 2010 Act.

## Public Register

Do you consider that any of the information contained within or provided in support of this application should not be disclosed:
(a) for reasons of national security;

YES $\square$ NO $\square$
(b) for reasons of confidentiality of commercial or industrial information where such confidentiality is provided by law to protect a legitimate commercial interest?

YES $\square$ NO $\square$

If YES, to either (a) or (b), please provide full justification as to why all or part of the information you have provided should be withheld.
$\square$

## WARNING

It is an offence under the Act under which this application is made to fail to disclose information or to provide false or misleading information.

Target duration for determination is 14 weeks. Please note that missing or erroneous information in your application and complications resulting from consultation may result in the application being refused or delayed.

Marine licence applications will not be accepted unless accompanied by a cheque for the correct application fee, or if an invoice is requested, until that invoice is settled. Target timelines for determining applications do not begin until the application fee is paid.

## Declaration

I declare to the best of my knowledge and belief that the information given in this form and related papers is true.


## Application Check List

Please check that you provide all relevant information in support of your application, including but not limited to the following:

- Completed and signed application form
- Project Drawings
- Maps/Charts
- Co-ordinates of the boundary points of the area of harbour jurisdiction (if you are a statutory harbour authority)
- Method Statement
- Photographs of the location of the project
- Additional information e.g. consultation correspondence (if applicable)
- Noise Registry - Initial Registration Form (if applicable)
- Pre-application Report (if applicable)
- Environmental Statement (if applicable)
- Payment (if paying by cheque)


## 1. Applicant Details

Title: $\begin{aligned} & \text { Reda } \\ & \text { cted }\end{aligned}$ Initials: $\begin{aligned} & \text { Reda } \\ & \text { cted }\end{aligned}$ Rurname: Redacted
Trading Titte (if appropriate): Park General Manager
Address: Elie Holiday Park Shell Bay, Elie KY9 1HB

Name of contact (if different):

Telephone No. (inc. dialing code):
Redacted

Email: Redacted

Statutory Harbour Authority?
YESNO

If YES, please provide a list of the latitude and longitude co-ordinates (WGS84) of the boundary points of the area of harbour jurisdiction using Appendix 01 Additional Co-ordinates form if necessary.
2. Agent Details (if any)


Initials: Redacte Redacted Surname:

Trading Title (if appropriate): Director
Address: Alex Butter Landscaping Ltd, West Countlich Farm, Kindallachan, Pitlochry, PH9 0NW

Name of contact (if different):
Telephone No. (inc. dialing code): Redacted
Email: Redacted

## 3. Payment

Enclosed Cheque $\square$ Invoice $\square$
Contact and address to send invoice to:
ApplicantAgentOther
If OTHER, please provide contact details:
Title: Initials: Surname:

Address:

Email:
$\sigma$

## 4. Application Type

Is this application for a new construction site or an existing construction site:
New Site $\square$ Existing Site
If an EXISTING SITE, please provide the consent/licence number and expiry date:

| Consent/Licence Number | Expiry Date |
| :--- | :--- |
|  |  |
|  |  |

5. Project Details
(a) Brief description of the project (e.g. construction of a new sea outfall):

Repair to sewer tail race damaged sections of the pipe protection
(b) Total area of the proposed works (in square metres):
$300 \quad \mathrm{~m}^{2}$
(c) Proposed start date (Target duration for determination of a marine licence application is 14 weeks):
20/02/2019
(d) Proposed completion date:

22/02/2019
(e) Cost of the works seawards of the tidal limit of MHWS:
£under 4950.00
(f) Location:

NS 851934 to NO 632087 \& NT 678792

Latitude and Longitude co-ordinates (WGS84) defining the extent of the project (continue on Appendix 01 Additional Co-ordinates form if necessary):

| Latitude |  |  |  |  |  |  |  |  |  |  | Longitude |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | - | 5 | 6 |  |  | 1 | 9 | 3 | 'N |  |  |  |  | - | - | 2 | . | 8 | 8 | 1 | 'W |
|  |  | - |  |  |  |  |  |  |  | 'N |  |  |  |  | - |  |  | . |  |  |  | 'W |
|  |  | - |  |  |  |  |  |  |  | ${ }^{\prime} \mathrm{N}$ |  |  |  |  | - |  |  | - |  |  |  | ${ }^{\prime} \mathrm{W}$ |
|  |  | $\bigcirc$ |  |  |  |  |  |  |  | ${ }^{\prime} \mathrm{N}$ |  |  |  |  | - |  |  | . |  |  |  | ${ }^{\prime} \mathrm{W}$ |
|  |  | $\bigcirc$ |  |  |  |  |  |  |  | ${ }^{\prime} \mathrm{N}$ |  |  |  |  | - |  |  | . |  |  |  | 'W |
|  |  | - |  |  |  |  |  |  |  | ${ }^{\prime} \mathrm{N}$ |  |  |  |  | - |  |  | . |  |  |  | 'W |
|  |  | - |  |  |  |  |  |  |  | ${ }^{\prime} \mathrm{N}$ |  |  |  |  | - |  |  | . |  |  |  | 'W |
|  |  | - |  |  |  |  |  |  |  | ${ }^{\prime} \mathrm{N}$ |  |  |  |  | - |  |  | . |  |  |  | W |
|  |  | - |  |  |  |  |  |  |  | ${ }^{1} \mathrm{~N}$ |  |  |  |  | - |  |  | - |  |  |  | 'W |
|  |  | - |  |  |  |  |  |  |  | ${ }^{6} \mathrm{~N}$ |  |  |  |  | - |  |  | . |  |  |  | 'W |

$(\mathrm{g})$ Is the project located within the jurisdiction of a statutory harbour authority?
YESNO

If YES, please specify statutory harbour authority:
$\qquad$
(h) Method statement including schedule of work (continue on separate sheet if necessary):

## See attached

(i) Potential impacts the works may have (including details of areas of concern e.g designated conservation and shellfish harvesting areas) and proposed mitigation in response to potential impacts (continue on separate sheet if necessary):

## SSSI - see method statement \& risk assessment attached

6. Deposits and/or Removals
(a) Permanent substance(s) or object(s) to be deposited and/or removed from below MHWS (continue on a separate sheet if necessary):

myEstor min People
P

(b) Method of delivery of substance(s) or object(s):

## Ready mix vehicle

3.0T excavator
2.5 T track dumper
(c) For work involving salt marsh feeding, beach replenishment or land reclamation please provide the following information relating to the substance(s) or object(s) to be deposited:

Quantity (tonnes):
$\square$
Nature of substance(s) or object(s) (e.g. sand, silt, gravel etc.):
$\qquad$
Source (if sea dredged state location of origin)
$\square$
Particle size:
$\square$
Have the substance(s) or object(s) been chemically analysed? YESNO If YES, please include the analysis data with your application
(d) Temporary substance(s) or object(s) to be deposited below MHWS (continue on a separate sheet if necessary):

| Type of Deposit | Description | Quantity \& Dimensions (metric) |
| :--- | ---: | ---: |
| Steel/lron |  | No. |
|  |  | Dimensions |
|  |  | Weight (kg/tonnes) |
| Timber | No. |  |
|  |  | Dimensions |


7. Disposal of Dredged Substance(s) or Object(s) at Sea
(a) Do you intend to apply for a marine licence for sea disposal of dredged substance(s) or object(s) as part of the project?

YES $\square$ NO
If YES, please specify nature of substance(s) or object(s) (e.g sand, gravel, silt, clay, rock etc.): N/A
(b) Quantity of substance(s) or object(s) (wet tonnes):
wet tonnes

A separate marine licence application will be required to be submitted for sea disposal.
8. Noise Monitoring

Will loud, low to mid frequency ( 10 Hz to 10 kHz ) impulsive noise be produced YES $\square$ NO by the project?

If YES, which please indicate the noise generating activities and sound frequencies:

| Noise Generating Activity | Sound Frequency (Hertz) |
| :--- | :---: |
| Use of Explosives |  |
| Use of Accoustic Deterrent Devices |  |
| Piling |  |
| Other (please describe below): |  |
|  |  |
|  |  |

If you have ticked YES, please complete the Noise Registry - Initial Registration form located at: http://www.scotland.gov.uk/Topics/marine/science/MSInteractive/Themes/noise-reduction

Marine licence applications will not be accepted until this form has been completed and submitted.
9. Statutory Consenting Powers

Do you, or (if appropriate) your client, have statutory powers to consent any aspect of this project?
No
10. Scotland's National Marine Plan

Have you considered the application with reference to Scotland's National Marine Plan?

YESNO

If YES, provide details of considerations made with reference to the policies, including but not limited to General Policies 7 and 13 (GEN 7 and GEN 13), that have been considered:
$\square$
If NO, please provide an explanation of why you haven't considered the National Marine Plan?
The works is a repair to an existing outfall and does not change any structure or discharge

## 11. Pre-Application Consultation

Is the application subject to pre-application consultation, under The Marine Licensing (Pre-application Consultation) (Scotland) Regulations 2013?

YESNO

If YES, please indicate the date of the public notice for the pre-application consultation event and the type of consultation event held (a copy of the public notice must be supplied with this application):

| Event Type | Date |
| :--- | :--- |
|  |  |

## 12. Consultation

List all bodies you have consulted and provide copies of correspondence:
SNH - see enclosed
13. Environmental Assessment
(a) Does the project fall under Annex I or II of the EIA Directive?

Annex I $\square$Annex IINeither ${ }^{\square}$

If ANNEX I or ANNEX II, please provide the screening opinion issued to you in relation to the project.
(b) Has an EIA been undertaken:
for the marine licence application to which this application relates for any other EIA regulator (e.g local authority)
14. Associated Works

Provide details of other related marine projects, including reference/licence numbers (if applicable):
N/A

## CITATION

FIRTH OF FORTH<br>SITE OF SPECIAL SCIENTIFIC INTEREST Fife, Clackmannanshire, Stirling, Falkirk, West Lothian, City of Edinburgh, East Lothian

Site code :8163

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NATIONAL GRID REFERENCE : NS }851934\mathrm{ to NO 632087 & NT }67879
OS 1:50000 Sheet NO :Landranger Series 58,59,65,66,67
    1:25000 Sheet NO : Explorer Series 349, 350, 351, 366, 367, 370,371
AREA :7423.19 hectares
NOTIFIED NATURAL FEATURES
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Geological :

: Slavonian grebe (Podiceps'auritus), non-breeding
: Cormorant (Phalacrocorax carbo), non-breeding
: Pink-footed goose (Anser brachyrhynchus), non-breeding
: Shelduck (Tadorna tadorna), non-breeding
: Mallard (Anas platythynchos), non-breeding
: Wigeon (Anas penelope), non-breeding
: Scaup (Aythya marila), non-breeding
: Eider (Somateria mollissima), non-breeding
: Long-tailed duck (Clangula hyemalis), non-breeding
: Common scoter (Melanitta nigra), non-breeding
: Velvet scoter (Melanitta fusca), non-breeding
: Goldeneye (Bucephala clangula), non-breeding
: Red-breasted merganser (Mergus serrator), non-breeding
: Oystercatcher (Haematopus ostralegus), non-breeding
: Ringed plover (Charadrius hiaticula), non-breeding
: Golden plover (Pluvialis apricaria), non-breeding
: Grey plover (Pluvialis squatarola), non-breeding
: Lapwing (Vanellus vanellus), non-breeding
: Knot (Calidris canutus), non-breeding
: Dunlin (Calidris alpina alpina), non-breeding
: Bar-tailed godwit (Limosa lapponica), non-breeding
: Curlew (Numenius arquata), non-breeding
: Redshank (Tringa totanus), non-breeding
: Turnstone (Arenaria interpres), non-breeding
: Sandwich tern (Sterna sandvicensis), non-breeding
: Eider (Somateria mollissima), breeding
: Shelduck (Tadorna tadorna), breeding
: Ringed plover (Charadrius hiaticula), breeding
The Firth of Forth Site of Special Scientific Interest (SSSI) is an extensive coastal area located on the east coast of Scotland. It stretches from Alloa to Crail on the north shore and to Dunbar on the south shore. It includes the estuary upriver from the Forth bridges and the firth east of the bridges. It is of importance for a variety of geological and geomorphological features, coastal and terrestrial habitats, vascular plants, invertebrates, breeding, passage and wintering birds.

## GEOLOGY

Stratigraphy: Lower Carboniferous
The coastal margins of the Forth demonstrate an exceptional variety of rocks and fossils that have been crucial in understanding the palaeogeography and palaeoecology of Scotland
during the Carboniferous geological period. At St Monans, between Elie and Anstruther on the Fife coast and on the southern margin of the Forth at South Queensferry, coastal exposures provide an insight into the Lower Carboniferous, or Dinantian sequences, beneath and surrounding the Forth. The Abden, Burdiehouse and Seafield Tower Limestones, the Pumpherston Shell Bed and Oil Shale, and the Dunnet Sandstones are all examples of names given to Lower Carboniferous rock layers, some of which (particularly the oil-shales, thicker limestones and coals) had economic significance.

## Stratigraphy: Upper Carboniferous

Westphalian rock layer sequences on the coast at Buckhaven and at Joppa help illustrate the palaeogeography and palaeoenvironment of the area during the Upper Carboniferous, when the great coal forests flourished around 308 million years ago, and document the start of desert conditions over the area as a prelude to the Permian period.

## Igneous Petrology

In intimate association with the Lower Carboniferous sedimentary rocks are various nationally significant volcanic rocks. Between East Wemyss and Anstruther and at North Berwick there are exceptional exposures of volcanic vents and igneous intrusions that document crustal instability and magmatic processes at the start of the Carboniferous. The vents at North Berwick are of particular note in that they contain blocks of rock that were derived from the lower levels of the crust. These have allowed an understanding of the structure of the lower crust in eastern Scotland. Burntisland, the east Fife coast, South Queensferry and Gullane all provide exposures illustrating a range of other nationally important volcanic features and structures.

## Mineralogy

Elie Ness in Fife is of note mineralogically for the occurrence of xenocrysts of pyrope garnet, the famous 'Elie Ruby', found in a volcanic neck. The 'rubies', together with a range of other unusual minerals, provide an insight into the conditions under which the host rock, an alkali basalt, crystallised.

## Palaeontology

Although of importance in understanding the Lower Carboniferous geology of the Forth area, and of Scotland as a whole, the sedimentary rock sequence has world-wide significance for fossil remains. At Burntisland in Fife, the Abden Bone Bed has yielded a rich and diverse fish fauna; other 'fossil fish' localities include Ardross Castle, also in Fife, Cheese Bay near Gullane, and Wardie Shore. Wardie is of international importance, yielding at least eighteen species of fish, including sharks, which are generally complete and in a fine state of preservation. Wardie and Cheese Bay have also yielded some of Europe's earliest amphibian remains. Granton Shore yielded the first ever recognised body fossils of the conodont animal, an eel-like fish, the remains of which have been used worldwide in dating rock layer sequences. A rich and diverse fossil flora has been found at Pettycur in Fife, Oxroad Bay near North Berwick and at Weak Law near Gullane. The Pettycur locality yields one of the best preserved Lower Carboniferous plant petrifaction fossil floras known in the world.

## Quaternary Geology \& Geomorphology

Kincraig Point demonstrates an exceptionally well-displayed sequence of raised shorelines, eroded in the volcanic agglomerate bedrock following the retreat of the last ice sheet between about 16,000 and 13,000 radiocarbon years ago. The erosional character of the shorelines is unusual and, as striking landforms, they complement the detailed sedimentary records of coastal change during the late glacial and postglacial periods that occur in more enclosed estuary situations in eastern Scotland.

At Dunbar, the coast is notable for a series of extensive shore platforms, including features that predate the last glaciation. Three of the platforms occur above present sea level, the highest with a crag and tall formation on its surface. These landforms are representative of the suite of erosional features found along the east coast of Scotland and demonstrate former sea-level
changes and different phases of marine erosion. Dunbar is one of the best examples in eastern Scotland illustrating the development of multiple shore platforms, as well as highlighting the contribution of older elements to the form of the present coastal landscape.

## Geomorphology

The coastine at Dunbar is also of note for the outstanding complexity of rocky coastal landforms which it exhibits. Of particular interest is a series of rock platforms representing different relative sea levels in the area but the associated cliffs, stacks, skerries and beaches are also of value. The exceptional diversity and intricacy of the landforms is related to the variety of sedimentary and volcanic rock types found here combined with structural weaknesses in these rocks and local variations in exposure and altitude.

## HABITATS

The Firth of Forth SSSI comprises an extensive mosaic of intertidal and coastal habitats. Extensive mudflats make up much of the intertidal zone with areas of sand, shingle, rock and boulders. Associated coastal habitats include saltmarsh, grassland and sand dunes.

The site is considered to be of special interest for the following habitats and species:

## Maritime cliff

Maritime cliff grassland is of limited occurrence, but between Burntisland and Kirkcaldy is the largest and most diverse coastal grassland in the SSSI, with abundant areas associated with the cliffs and rock outcrops. Thrift Armeria maritima, kidney vetch Anthyllis vulneraria and distant sedge Carex distans are typical species. Maritime cliff grassland also occurs along the East Wemyss to Anstruther coastline and on the Dunbar coast. In these grasslands, abundant rock rose Helianthemum nummularium is typical, with species such as thyme Thymus polytrichus, crested hair-grass Koeleria macrantha, burnet saxifrage Pimpinella saxifraga, agrimony Agrimonia eupatoria and purple milk-vetch Astragalus danicus.

## Saltmarsh

Important areas of saltmarsh are supported at Skinflats, Tyninghame and Aberlady. Dumbarnie Links contains the largest area of saltmarsh on the north shore of the Firth of Forth. The largest area of pioneer saltmarsh in the Forth occurs on Alloa Inch. Saltmarsh communities in the Forth are characteristically zoned from low to high water mark and are dominated by sea aster Aster tripolium, common saltmarsh grass Puccinellia maritima, saltmarsh rush Juncus gerardii, and sea club-rush Bolboschoenus maritimus. Several of the saltmarsh plant communities are scarce on the east coast of Scotland.

Beach head saltmarsh occurs at scattered localities at Blackness Bay, Burntisland Bay, Torry Bay, and Ruddons Point. Here, greater sea-spurrey Spergularia media, sea plantain Plantago maritima, glasswort Salicornia europaea and sea arrowgrass Triglochin maritimum are common.

## Sand dunes

The main areas of sand dune vegetation occur in the outer Firth. Between Gullane and Broad Sands is the largest and most complex sand dune system in the Lothian area, with its noteworthy lichen-rich dune slacks. Neighbouring Aberlady Bay contains the most extensive complex of sand dune, saltmarsh and mudflat in SE Scotland. The largest area of calcareous sand dunes in Fife, including representative areas of damp dune slack, herb-rich pasture, and intact foredune ridge occurs at Dumbarnie Links, which supports many local rarities and several 'southern' species which are rare in Scotland. Calcareous sand dunes are also found at Ruddons Point and its herb-rich dune pasture is of a type not found elsewhere in Fife.

Dune grassland has developed between East Wemyss and Anstruther, Aberlady, Tyninghame and the North Berwick coast, with characteristic species lyme-grass Leymus
arenarius, marram grass Ammophila arenaria, cowslip Primula veris, lesser meadow-rue Thalictrum minus, bloody crane's-bill Geranium sanguineum and restharrow Ononis repens. Mineral enriched grasslands are an unusual habitat in East Lothian.

## Mudflats

The Firth of Forth contains large areas of mudflats which while not the of particular impotance for their invertebrate populations are important because of the large populations of birds which they support. Good examples can be found at Skinflats, Kinneil Kerse and Torry Bay.

## Saline lagoon and Transition grassland

The intertidal bays of Skinflats and Kinneil Kerse support a range of other estuarine habitats and plant communities including brackish fen and coastal sluiced saline lagoons. The lagoons and brackish fen are characterised by transition zone species such as common reed Phragmites australis, sea club-rush Bolboschoenus maritimus, false fox-sedge Carex otrubae, common spike-rush Eleocharis palustris and abundant spiked water-milfoil Myriophyllum spicatum. Coastal lagoons are a rare habitat in SE Scotland and brackish fens are uncommon.

Extensive freshwater fen transition communities, uncommon elsewhere on the Forth, occur in the upper Forth estuary with reed sweet-grass Glyceria maxima, meadowsweet Filipendula ulmaria, yellow iris Iris pseudacorus and hemlock water-dropwort Oenanthe crocata.

## Lowland neutral grassland

Extensive tall herb-rich neutral grassland occurs between Burntisland and Kirkcaldy where meadow crane's-bill Geranium pratense, false brome Brachypodium sylvaticum and the locally rare hemp agrimony Eupatorium cannabinum are common. Neutral grasslands also occur at Skinflats and Kinneil Kerse.

Species-rich coastal and semi-improved grassland is also found at Blackness Bay, where it forms the most diverse coastal grassland in West Lothian and Falkirk.

## SPECIES

## Vascular plant assemblage

The diversity of habitats within the Forth supports a high number of vascular plants, many of which are nationally or locally rare. Nationally scarce species include two eelgrasses -narrow-leaved eelgrass Zostera marina and dwarf eelgrass $Z$. noltei, which are supported on the extensive intertidal mudflats. The locally rare sea wormwood Seriphidium maritimum, wild cabbage Brassica oleracea, and purple ramping fumitory Fumaria purpurea are also found on drier coastal habitats.

The grasslands are particularly rich in flowering plant species and support many locally rare species such as shining crane's-bill Geranium lucidum, bulbous buttercup Ranunculus bulbosus, yellow horned-poppy Glaucium flavum, pyramidal orchid Anacamptis pyramidalis, viper's bugloss Echium vulgare and wild clary Salvia verbenaca. Nationally scarce thyme broomrape Orobanche alba and maiden pink Dianthus deltoides are also located in some grasslands.

Several sand dune areas hold the nationally scarce rush-leaved fescue Festuca arenaria and variegated horsetail Equisetum variegatum.

## Beetle assemblage and Northern brown argus (Aricia artaxerxes)

Large numbers of insects occur throughout the site, reflecting the range of habitats encountered. Several nationally scarce species of invertebrates occur, including the sand dart moth Agrotis ripae, and the northern brown argus butterfly Aricia artaxerxes, scarce and declining in Britain, which has two Fife colonies, between Burntisland and Kirkcaldy, and

East Wemyss and Anstruther. Several species of beetles are rare or very local in Scotland, including Cleonis pigra, Lebia (Lamprias) chlorocephala, Microplontus rugulosus and Scymnus (Scymnus) schmidti.

## Birds: Wintering

The Firth of Forth supports abundant wildfowl and waders and is particularly important for its wintering bird species. The Firth of Forth is the second most important estuarine area for wintering birds in Scotiand, and eleventh in the UK, and is significant both in terms of waterfowl density and abundance. Most of the wildfowl and waders in the Firth of Forth are found at internationally or nationally important levels.

The invertebrate-rich mudflats and sandflats are used for feeding at low tide whilst higher ground, including saltmarsh, is used for high tide roosts and feeding sites. The largest expanses of mud are in the inner Forth at Kinneil Kerse, Skinflats, Torry Bay and Alloa Inches while large sandflats are found in the outer Forth at Drum Sands, Tyninghame and Aberlady Bay. Rocky shorelines in the outer Forth are an important resource both for feeding and roosting birds. Lagoons at Kinneil Kerse, Torry Bay and Musselburgh are used by large numbers of birds for feeding and roosting.

The internationally important wintering species within the Forth are shelduck Tadorna tadorna, which includes an important post-breeding moult flock in the inner Forth; bar-tailed godwit Limosa lapponica; knot Calidris canutus; golden plover Pluvialis apricaria and redshank Tringa totanus, using the mud and sandflats; and turnstone Arenaria interpres, which are commonly found on shingle or rocky shorelines. Pink-footed geese Anser brachyrhynchus roost at Aberlady Bay while red-throated diver Gavia stellata and Slavonian grebe Podiceps auritus use offshore areas but also come close inshore at times.

The intertidal areas support nationally important numbers of grey plover Pluvialis squatarola, ringed plover Charadrius hiaticula, oystercatcher Haematopus ostralegus, dunlin Calidris alpina and curlew Numenius arquata, while offshore, particularly in the outer Forth, there can be found large numbers of common scoter Melanitta nigra and velvet scoter Melanitta fusca, goldeneye Bucephala clangula, scaup Aythya marila, long-tailed duck Clangula hyemalis, red-breasted merganser Mergus serrator, eider Somateria mollissima, great crested grebe Podiceps cristatus and cormorant Phalacrocorax carbo.

An important post-breeding population of Sandwich terns Sterna sandvicensis uses the Forth whilst on passage. The coast just east of Edinburgh is a particularly important area for this species.

Wigeon Anas penelope, Mallard Anas platyrhynchos, and lapwing Vanellus vanellus are also found in important numbers in a variety of habitats.

## Birds: Breeding

There are several breeding birds of importance in the Forth. Nationally important numbers of breeding eider occur at Aberlady Bay, on the North Berwick Coast, and between Gullane and Broad Sands where there are also important moulting eider flocks. Important breeding colonies of shelduck Tadorna tadorna occur at Aberlady Bay, Alloa Inch and Skinflats, with a large flock of post-breeding moulting shelduck, a rare feature in Britain, occurring at Kinneil Kerse. Nationally important breeding ringed plover occur at Gullane to Broad Sands, Tyninghame, Skinflats and Torry Bay.

## NOTIFICATION HISTORY

The Firth of Forth SSSI includes 18 former SSSIs notified under the Wildlife and Countryside Act 1981, parts of which were previously notified under the National Parks and Access to the Countryside Act 1949. Dates of notification are listed below:

| Aberlady Bay | 1952, 1977 | 15 August 1983 |
| :---: | :---: | :---: |
| Alloa Inches | 1971 | 06 October $1988{ }^{1}$ |
| Blackness Bay |  | 24 August 1987 |
| Burntisland - Kirkcaldy Coast | 1955, 1971 | 16 November $1989{ }^{1}$ |
| Dumbarnie Links | 1955, 1971 | 11 October $1982{ }^{2}$ |
| Dunbar Coast |  | 30 April 1984 |
| East Wemyss to Anstruther Coast | 1953, 1971 | 07 May 1991 |
| Forth Bridge - Granton Shore | 1965, 1971, 1974 | 24 April $1986{ }^{1}$ |
| Gosford Bay to Port Seton | 1978 | 30 April $1984{ }^{\dagger}$ |
| Gullane to Broad Sands | 1967, 1978 | 15 August 1983 |
| Kinneil Kerse | 1978 | 18 January $1988{ }^{1}$ |
| Leith - Prestonpans | 1972 | 24 April $1986{ }^{1}$ |
| North Berwick Coast | 1957, 1972, 1978 | 30 April 1984 |
| Ruddons Point |  | 21 February 1984 |
| Skinflats | 1973 | 10 March $1988{ }^{1}$ |
| Torry Bay | 1978 | 12 December $1991{ }^{2}$ |
| Tyninghame Shore | 1952, 1972, 1978 | 30 April $1984{ }^{2}$ |
| Wardie Shore |  | 30 November 1987 |
| ${ }^{1}$ Site boundary amended with net increase in area |  |  |
| ${ }^{2}$ Site boundary amended with net | ase in area |  |

Notified under the 1981 Act as Firth of Forth SSSI : 15 August 2000 with a 495 ha increase in area. (Notification confirmed on 10 May 2001 with a 90 ha reduction in area).

Notification reviewed under the 2004 Act: 29 March 2011

## REMARKS

Measured area of site corrected (from 7420 ha).
Part of the Firth of Forth SSSI is designated as part of the Firth of Forth special protection area (SPA) for the birds listed below.

Birds: Red-throated diver (Gavia stellata), non-breeding
Great crested grebe (Podiceps cristatus), non-breeding
Slavonian grebe (Podiceps auritus), non-breeding
Cormorant (Phalacrocorax carbo), non-breeding
Pink-footed goose (Anser brachyrhynchus), non-breeding
Shelduck (Tadorna tadorna), non-breeding
Mallard (Anas platyrhynchos), non-breeding
Wigeon (Anas penelope), non-breeding
Scaup (Aythya marila), non-breeding
Eider (Somateria mollissima), non-breeding
Long-tailed duck (Clangula hyemalis), non-breeding
Common scoter (Melanitta nigra), non-breeding
Velvet scoter (Melanitta fusca), non-breeding
Goldeneye (Bucephala clangula), non-breeding
Red-breasted merganser (Mergus serrator), non-breeding
Oystercatcher (Haematopus ostralegus), non-breeding

Ringed plover (Charadrius hiaticula), non-breeding Golden plover (Pluvialis apricaria), non-breeding

Grey plover (Pluvialis squatarola), non-breeding
Lapwing (Vanellus vanellus), non-breeding
Knot (Calidris canutus), non-breeding
Dunlin (Calidris alpina alpina), non-breeding
Bar-tailed godwit (Limosa lapponica), non-breeding
Curlew (Numenius arquata), non-breeding
Redshank (Tringa totanus), non-breeding
Turnstone (Arenaria interpres), non-breeding
Sandwich tern (Sterna sandvicensis), passage
Waterfowl assemblage, non-breeding

## FIRTH OF FORTH SITE OF SPECIAL SCIENTIFIC INTEREST

## OPERATIONS REQUIRING CONSENT FROM SCOTTISH NATURAL HERITAGE

If you propose to carry out, or permit to be carried out, any of the operations listed below, you must first obtain consent from SNH unless a local authority has granted you planning permission (under Part III of the Town and Country Planning (Scotland) Act 1997) or a designated regulatory authority has given you written permission (under s. 15 of the Nature Conservation (Scotland) Act 2004). If you have such a permission you may proceed without obtaining consent from SNH for the same operation.

Ref. No.
1 Cultivation, including ploughing, rotovating, harrowing and re-seeding of grassland, sand dune and saltmarsh.

2 Changes in the grazing regime (including type of stock or intensity or seasonal pattern of grazing and cessation of grazing).

3 The introduction of stock feeding and changes to stock feeding practices.
4 Changes in the mowing or cutting regime.
5 Application of manure, fertilisers and lime.
6 Application of pesticides, including herbicides (weedkillers).
7 Dumping, spreading or discharge of any materials.
$9 \quad$ Introduction of any plant ${ }^{1}$ or seed.
11 The destruction, displacement, removal or cutting of any plant ${ }^{1}$ or plant ${ }^{1}$ remains.

13a Drainage (including the use of mole, tile, tunnel or other artificial drains).
13b Modification of the structure of water courses (e.g. burns, springs, ditches, drains), including their banks and beds, as by re-alignment, regrading and dredging.

14 The changing of water levels and tables and water utilisation (including irrigation, storage and abstraction from existing water bodies and through boreholes).

Infilling of ditches, drains, ponds or marshes.

16b Changes in coastal fishing practice or fisheries management and seafood or marine life collection, including the use of traps or fish cages

17 Reclamation of land from sea, estuary or marsh.
18 Commercial bait digging in intertidal areas.
19 Erection of sea defences or coast protection works, including cliff or landslip drainage or stabilisation measures.

20 Extraction of minerals, including shingles, sand and gravel.
21 Construction of tracks, fences, hardstands, banks, ditches or the maintenance of pipelines and cables.

23 Erection of permanent or temporary structures, or the undertaking of engineering works, including drilling.

24 Battering or grading of landforms.
25 Removal of geological specimens, including rock samples, minerals and fossils.

26 Use of vehicles or craft which would damage or disturb the flora, fauna or landform.

27 Recreational, research, educational or other activities, other than those carried out responsibly in keeping with the Scottish Outdoor Access Code.

## Notes

1 "plant" includes any flowering plant, shrub, herb, seaweed, alga, fungus, lichen or moss.

# Scottish Natural Heritage <br> Dualchas Nàdair na h-Alba 

All of nature for all of Scolland
Nadar alr fadairson Aba airlad

Abbeyford Caravan and Trailer
Company Ltd
Pensarn Industrial Estate
LL22 7PW
Redacted Manager Shell Bay Caravan park
[by email]

10 February 2014
Our ref: A1196255/CLC129097

Redacted<br>Dear

Firth of Forth SSSI - East Wemyss to Anstruther Coast
Thank you for your application, in accordance with section 16(1) of the Nature Conservation (Scotland) Act 2004, received 29 January 2013, for consent to carry out the following operation(s) on land within the above Site of Special Scientific Interest:

11 The removal of strandline seaweed vegetation from the beach located at Shell bay. Consented to mechanically remove 30 tonnes of vegetation in the form of deposited seaweed.

This consent will expire on 31 January 2016.
Scottish Natural Heritage hereby consents to the above proposal(s) being carried out in the manner, timing and location specified.

The issue of this consent does not absolve you from any contractual or legislative responsibility you may have to inform or obtain the permission of any other party prior to carrying out the proposed operation.

Yours sincerely
[by e-mail]
Redacted

```
    Operations Officer - East Fife
    Forth
Redacted
```


# Scottish Natural Heritage 

All of nature for all of Scotland

## Redacted

Abbeyford Caravan and Trailer Company Ltd Pensarn Industrial Estate
Abergele
Conwy
Clwyd
LL22 7PW

29 March 2011
Our ref: SIT/SSSI/8163/NOT/REV
Dear ${ }^{\text {Redacted }}$

## Firth of Forth Site of Special Scientific Interest (SSSI)

You may be aware from earlier correspondence that the Nature Conservation (Scotland) Act 2004 overhauled the arrangements for SSSIs*. Scottish Natural Heritage may now review existing SSSI notification documents and consents and update and improve them to help you benefit from the new arrangements.

We have now reviewed the documents for your SSSI and have made the following changes. The reviewed documents take effect from the date of this letter.

Boundary map - We have not changed the site boundary. Should you require a more detailed map indicating your specific area of interest please contact the address below.

Citation - We have updated various administrative details and remarks. We have added 'Mudflats', 'Red-throated diver (Gavia stellata), 'Slavonian grebe (Podiceps auritus)', 'Golden plover (Pluvialis apricaria)', 'Lapwing (Vanellus vanellus)', 'Wigeon (Anas penelope)', 'Mallard (Anas platyrhynchus)' and 'Sandwich tern (Sterna sandvicensis)' as protected natural features.

We have also removed 'Breeding bird assemblage' as a protected natural feature and have revised the description of other natural features.

## List of operations requiring consent (ORC list)

We have amended the following ORC and reduced the range of associated operations for which you need consent from SNH:

21 Construction of tracks, fences, hardstands, banks, ditches or the maintenance of pipelines and cables.

## Site management statement

We have updated the site's management statement which you may find helpful, for example, to inform an application to land management incentive schemes such as Rural Development Contracts. We keep these statements under review and would be interested to hear from you of any comments on our vision for the management of this site or, indeed, of any suggestions for a different approach to conserving and enhancing its natural features.

## Consents

If we have records of having issued consent(s) relating to your land within the SSSI, we have collated them for your information.

For each collated consent, we have indicated its current status (for example 'valid' or 'expired'). We have also marked any consents for operations now regulated by a relevant regulatory authority, or made irrelevant by changes to the ORC list. Where we have issued consents for the same or very similar operations at different times we may have combined these into a single consent.

We have not sought to restrict your currently consented operations. If you believe we have missed out a valid consent or we are proposing to change the wording of a consent in a way that will affect your management activities, please tell us immediately. We may ask you to provide us with evidence of any other written consents that you believe we have previously issued to you.

I hope you find these reviewed documents and list of your consents both helpful and informative. Should you require additional copies of the citation or ORC list, for example to give to any new owner or occupier of your land within the SSSI, please contact me. Alternatively, you can get them from our website through the SNHi/ SiteLink facility (www.snh.gov.uk/snhi/ or link on the home page).).

If you have any comments or queries, please do not hesitate to contact me.
Yours sincerely
Redacted

## Redacted

## Area Manager

Encl. Application and consent form
*The relevant sections of the 2004 Act are...

- $6(5) \& 8(1)$ and Schedule $5(5)$ for the notification of amended documents,
- $6(4) \& 16(5)(a)$ for the review of existing consents, and
- Schedule $5(4)$ for the adoption of site management statement.

| Consents collation and review form |  |  |  |
| :---: | :---: | :---: | :---: |
| SSSI name Firth of Forth |  |  | Name of Owner/Occupier Abbeyford Caravan \& Traller Company |
| SNH Area Forth and Borders |  | Site Code: 8163 | Reviewed By: ${ }^{\text {Redacted }}$ |
| Status (tick one) |  | Owner: $V$ | Occupier/ wayleave/ other rights (specify): |
|  |  | Private person or company: $\downarrow$ | Public body: |
| ORC ref no. | Existing Consented Operations | Reasons for modification or withdrawal; condition applied | Reviewed consented operations |
| 10 | Normal pest control by legal methods. | Valid - no change | Normal pest control by legal methods. |
| 12 | Management of existing shelter belt. | Valid - no change | Management of existing shelter belf. |
| $21$ | Maintenance of existing tracks and fences. | Valid - no change | Maintenance of existing tracks and fences. |
| 27 | Existing use of Point for informal recreation. | Valld - no change | Existing use of Point for informal recreation. |
| 26 | Use of exlsting tracks by vehicies. | Valid-no change | Use of existing tracks by vehicles. |
| 21 | Construction of two aerial mast ranger brigges and timber boardwalk - in accordance with attached method statement. Location indicated on attached map. | Not valid - time expired |  |
| 23 | Construction of two aerial mast ranger bridges and timber boardwalk - in accordance with attached method statement. Location indicated on attached map. | Not valld - time explted |  |
| Approved by: |  |  | (signed by Area Manager) |
| Date approved: |  |  |  |





Upgrade

## Latitude

### 56.193827

Longitude

## -2.881243

Accuracy: 5 m
Last location age: 0 seconds


Scottish Environment
Protection Agency

5 Redwood Crescent
Peel Park
EAST KILBRIDE
G74 5PP

## Compliance Report

## Sample from : SHELL BAY CARAVAN PARK ST EFFLUENT

| Date of Sample: | : 03-Jun-13 at 0940 hrs | Location Code : 1748 | Version Number: 1 |  |
| :---: | :---: | :---: | :---: | :---: |
| Sample Number : | : 2291632 | Taken By: Redacted |  |  |
| Se ple Type: | Sewage and Trade Effluent Cateqorv 4 (50-199 p.e. sec) | Team Area: Fife |  |  |
| Licence Ref: CAR/L/1001486 |  |  |  |  |
| Test Reference | e Determinand |  | Result | Consent Limits |
| EK INR-P-904 | 04 Suspended So | $5^{\circ} \mathrm{C}$ ) | $72.7 \mathrm{mg} / \mathrm{L}$ | 120 |

Authorised By Fiona Wyllie - Chemistry Manager 5-Jun-13

This sample complies with its discharge limits.
Discharge Sample Compliance History

| C | C | C | C |  |
| :---: | :---: | :---: | :---: | :---: |
| $21 / 06$ | $25 / 07$ | $21 / 08$ | $03 / 06$ |  |
| C = Complies |  | $F=$ Fails $\quad U=$ Unclassified | $X=$ Attempted Sampling |  |

Discharge Compliance Pass Rate 100\%


1327
Tests marked with * in this document are not included in UKAS schedule for the laboratory Tests marked with \# in this document were carried out by a UKAS accredited subcontractor Results marked with ^ in this document indicate that the handling of the sample for this analysis deviated from standard procedure and as a consequence the reliability of the results may be affected

Test laboratory codes: $A B$ - Aberdeen
DW - Dingwall
ED - Edinburgh
EK - East Kilbride
EC - Eurocentral

# ALEXBUTTER LANDSCAPING LTD 

## Method Statement - Shell Bay

We will require 20 hours to do the work in decent conditions and tides. It'll be l'd say for the first seaward 100 m take 8 hours/10hours but may be over 2 or even 3 days due to tide etc. However, once we're on the inner section it will be one day.

## The Plan

1. We will have 3 operatives $c / w$ tracked 2 tonne dumper (rubber tracks) and a 3 tonne excavator on rubber tracks at the point nearest to the tailrace, we will take the 2 machines on to the shore ensuring we do not damage the embankment.
2. With the small plant we will gather rocks, average size $300-500 \mathrm{~mm}$ and place on both sides of the exposed pipe work ready for concrete works.
3. We intend to bring a mixing vehicle on to site and mix as required. Along the existing track we will place the mixing area on timer sheets and decant by chute into the dumper.
4. On completion of the concrete works we will remove all debris and leave the site as found.

## ALEX BUTTER LANDSCAPING RISK ASSESSMENT

| CONTRACT | Shell Bay Caravan Park, Elie |
| :--- | :--- |
| SITE |  |

## ACTIVITY BEING ASSESSED $\quad$ Reparation of sewer outfall

| Possible Hazards | 1. Rough terrain <br> 2. Damage to flora \& fauna Low - Risk is acceptable. Existing control <br> measures are deemed suitable and sufficient. <br> 1. Tidal issues <br> 2. Possibility of contamination from <br> sewerage Med - Action is required to reduce the risk, effort, <br> time and cost should be proportional to the risk. <br> Interim measures maybe necessary in short term. <br> 3. Access \& egress to work area High - Risk is unacceptable. Immediate action <br> required. |
| :--- | :--- |


| People at Risk | 1 Employees | 2 Client | 3 General Public |
| :--- | :--- | :--- | :--- |
| CURRENT METHOD OF WORK AND CONTROL MEASURES: |  |  |  |

Works will be carried out by a skilled 3-man team. The team leader will ensure the site is safe to conform to the method statement plan. A site induction will be carried out by the contracts manger with a suitable Abbeyford Leisure employee present.

## Extreme care will be taken working near slopes and water. Correct safety equipment will be worn at all times.

During the works operatives must ensure:

1. Appropriate PPE is worn at all times
2. A safe access is formed with timbers to allow access for small plant to the work area
3. The ready-mix vehicle will be guided in 8 out of the site
4. All vehicles must have access to clean water for handwashing in case of sewerage contamination
5. The ready-mix discharge area must have landscape fabric pegged onto the existing surface to eliminate spillage
6. All personnel will be issued with tidal timetable and the times of low tide will be highlighted

The site will be left neat and tidy and our team leader will report to Abbeyford Leisure on completion of works and photographic evidence will be sent to our office.

ABL operatives to carry out daily inspections on all machinery/equipment and record checks on a records sheet with any faults being reported both on the records sheet and to ABL head office. Defects must also be recorded on time sheets for action.

1. Liaise with Abbeyford Leisure personnel on safe access to work areas prior to work commencing ensuring a safe perimeter is set up prior to works commencing.
2. Always use Spill mats when refuelling equipment.
3. PPE must be worn by all ABL employees, the PPE worn will be job specific.
4. The works will be carried out by authorised ABL personnel who will be part of a 3-man team.
5. The works will be assessed prior to works commencing, once the team leader is happy with the method then work will commence.
6. Clearance works will be carried out as per the method statement using due care and
attention, the team leader will assess the risks on a regular basis and act accordingly.

ABL Employees to record any changes to method of works above. Recording the time and day changes were made and why.

## Residual risk rating using current method/controls

Risk rating using current method/controls

| Risk | Rating |
| :--- | :--- |
| Operations injury | low |
| Equip. injury | low |
| Injury to others | low |
| Fuel/oil spill | low |

General Information
General Information

| COSHH Assessment | Fuel, cement, ballast |
| :--- | :--- |
| Manual Handling | 25kg Max (per person) |
| Method Statement | Attached |
| Safety Policy | N/A |
| Specify HSE Docs | N/A |


| Review Date:- N/A | Assessed by:- <br> Redacted | Date of assessment:- $14 / 12 / 2018$ |
| :--- | :--- | :--- |



## COSHH ASSESSMENT


Serial Number: ABL/COS/006

Sign:
Date:
Review Record (Sign \& Date):

## E <br> COSHH ASSESSME

| SUBSTANCE／MATERIAL ASSESSED |  |  | SUBSTANCE／MATERIAL STATE |  |  |  | EXPOSURE |  | CATEGORY OF DANGER |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NAME：A butte <br> DATE ASSES REVIEW DAT ASSESSED |  | Aggregates <br> $14^{\text {Th }}$ fegruary 2016 $13^{\text {Th }}$ FEBRUARY 2021 $\circ \frac{\circ}{0}$ 용 | SPRAYS DUSTS MISTS | 믐 | FUMES SOLID LIQUID | $\begin{aligned} & \text { ㅁ } \\ & \text { 品 } \end{aligned}$ | DAILY <br> WEEKLY MONTHLY SIX MONTHLY anNuALLY |  | FLAMMABLE 品 CORROSIVE <br> HIGHLY FLAMMABLE 品 EXPLOSIIVE <br> IRRITANT OXIDING <br> TXICIC HARMUL <br> VERY TOXIC ENVIRONMENT HAZ． |  |  | 吕 吕 吅 |
| ENTRY ROUTE |  |  | PERSONS AT RISK |  |  | INFORM |  |  | CONTROL METHODS |  | PPE TYPE |  |
| ABSORPTION INHALATION INGESTION PUNCTURE | $\begin{aligned} & \text { 品 } \\ & \text { 品 } \end{aligned}$ | OEL 品 <br> MEL  <br> CARCINOGEN 吕 | Employees CLIENT YOUNG PERSONS |  | 品 | EMPL <br> NON <br> VISIT <br> PUBL | YeES <br> MPLOYEES RS <br> NTS | 品 品 | Elimination SUBSTITUTION ENGINEERING PROCEDURAL PPE | $\begin{aligned} & \text { ㅁ } \\ & \text { 吕 } \\ & \text { 侣 } \end{aligned}$ | RPE BODY EYES HAND FEET | 吕 岢 吕 |
| DESCRIPTION OF THE HAZARD |  |  | EXISTING CONTROLS |  |  |  |  |  | FURTHER ACTION |  |  |  |
| Dust in dry conditions（during dry weather） |  |  | Wet material when delivered and as used to be assessed on site October to March <br> Use glasses／goggles and masks if dust cannot be managed |  |  |  |  |  | none |  |  |  |

COSHH ASSESSMENT
COSHH Assessment
Serial Number：ABL／COS／017

| SUBSTANCE／MATERIAL ASSESSED |  |  |  | SUBSTANCE／MATERIAL STATE |  |  |  | EXPOSURE |  |  | CATEGORY OF DANGER |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NAME： <br> DATE ASSESS REVIEW DATE： ASSESSED B |  | Ready Mix Concrete <br> 24／08／17 |  | SPRAYS <br> DUSTS <br> MISTS <br> WET CONCRETE | $\begin{aligned} & \text { 吕 } \\ & \text { 保 } \end{aligned}$ | FUMES SOLID LIQUID | ㅁ | DAILY <br> WEEKLY MONTHLY ANNUALLY |  | 或 吕 吕 | FLAMMABLE <br> HIGHLY FLAMMABLE IRRITANT Toxic VERY TOXIC | CORROSIVE EXPLOSIVE OXIDISING HARMFUL ENVIRONMENT HAZ | 吕 品 吕 |
| ENTRY ROUTE ${ }^{\text {EH }} 40$ |  |  |  | PERSONS AT RISK |  |  | INFORM |  |  |  | CONTROL METHODS | PPE TYPE |  |
| ABSORPTION INHALATION ingestion PUNCTURE | $\begin{aligned} & \text { ㅁ } \\ & \text { 呺 } \end{aligned}$ | oel MEL CARCINOGEN |  | EMPLOYEES CLIENT YOUNG PERSONS |  |  | EMPLOYEES  <br> NON EMPLOYEES 品 <br> VISITORS $\square$ <br> PUBLIC $\square$ <br> PARENTS $\square$ |  |  |  | ELIMINATION 口 <br> SUBSTTUUION 号 <br> ENGINEERING 口 <br> PROCEDURAL 口 <br> PPE Ø． | RPE BODY EYES FAND | 吅 曷 何 |
| DESCRIPTION OF THE HAZARD |  |  |  | EXISTING CONTROLS |  |  |  |  |  |  | FURTHER ACTION |  |  |
| Ready mix concrete－C30 mix |  |  |  | PPE： <br> Staff must wear gloves <br> Staff must wear safety glasses <br> Staff must wear safety boots |  |  |  |  |  |  | Thoroughly wash any debris which comes into contact with the skin，paying particular attention to the eyes． |  |  |


| SAFETY DATA SHEET |  |
| :--- | :---: |
| Issue date $\quad$ SEP 2010 |  |
| Page 1 of 2 |  |

BREEDON
AGGREGATES

## 1 Identification of Substance \& Company

## NATURAL AGGREGATES

## Companies:

Breedon Aggregates England Limited
Breedon Quarry
Breedon on the Hill
Derby
DE73 8AP
Telephone: 01332694010
Fax: 01332863149
Emergency Telephone: 01332694010

## Breedon Aggregates Scotland Limited

Ethiebeaton Quarry
Kingennie
Newbigging
igus
DD5 3RB
Telephone: 01382537600
Fax: 01382537619
Emergency Telephone: 01382537600

## 2 Composition / Information on Ingredients

Crushed rock and sand and gravel aggregates.
(Separate data sheets are available for powdered aggregates)

## 3 Hazards Identification

These products are NOT classified as hazardous in accordance with the CHIP regulations (SI 3247:1994).

If inhaled in excessive quantities over a prolonged period or extended period, respirable dust can constitute a long term health hazard. Dusts containing Respirable Crystalline Silica (Quartz) present a greater hazard.

Some sand aggregates are unsuitable for sand blasting erations as they may break down, producing respirable dust .Jntaining Quartz.

Advice on the Quartz content and other chemical information is available from the supplying unit.

## 4 First Aid Measures

## Summary of First Aid Procedures

## Inhalation

Immediately remove to fresh air. If breathing is stopped or irregular, apply artificial respiration and seek medical attention.

## Skin Contact

Wash with water. Prolonged contact may cause irritation.

## Eye Contact

Immediately and thoroughly irrigate with water. The material is abrasive and may scratch the surface of the eye. If pain persists seek medical attention.

## Ingestion

Remove to fresh air and give water to drink. Seek medical advice.

## 5 Fire Fighting Measures

## Suitable Extinguishing Media

Not applicable.
Unsuitable Extinguishing Media
Not applicable.

## Special Exposure Hazards in Fire

 None.
## Special Protective Equipment for Fire Fighters

 None.
## 6 Accidental Release Measures

Personal Precautions
Avoid breathing in dust.

## Environmental Precautions

Entry into watercourses should be avoided.

## Methods for Cleaning

Spray with water to prevent airborne dust.
Avoid dry sweeping which creates dust.

## 7 Handling and Storage

## Handling

The product should be handled to minimise the creation of airborne dust.

## Storage

No special requirements.

## 8 Exposure Controls / Personal Protection

Take Measures to Prevent
Inhalation of dust from aggregates should be avoided.
Exposure Control Limits / Source
Total Inhalable Dust:
W.E.L. $10 \mathrm{mg} / \mathrm{m}^{3}$ 8 Hours T.W.A.

Respirable Dust: W.E.L. $4 \mathrm{mg} / \mathrm{m}^{3}$ 8 hours T.W.A.

Respirable Quartz:
W.E.L. $0.1 \mathrm{mg} / \mathrm{m}^{3}$ 8 Hours T.W.A.
W.E.L. = Workplace Exposure Limit
T.W.A. $=$ Time Weighted Average

## Respiratory Protection

Suitable dust masks should be worn in enclosed spaces where the handling or further crushing of dry aggregates is taking place and where adequate ventilation is not provided.

## Hand Protection

Gloves.
Eye Protection
Goggles may be required.
Skin Protection
Overalls.

## 9 Physical and Chemical Properties

## Appearance

Odour
pH
Boiling Point / Range
Melting Point / Range
Flash Point
Flammability
Auto Flammability
Explosive Properties
Oxidising Properties
''7pour Pressure
kelative Density
Water Solubility
Fat Solubility

## Granular solid

None
Various
Not determined
Not determined
Not applicable
Not applicable
Not applicable
Not applicable
Not determined
Not applicable
Above 2.0
Dependent on rock type
Not determined

## 10 Stability and Reactivity

Conditions to Avoid
None.
Materials to Avoid
Acids (for aggregates containing $\mathrm{CaCO}^{3} \& \mathrm{MgCO}^{3}$ )

## Hazardous Decomposition Products

Limestone aggregates may react with acid groundwater to release carbon dioxide gas, which may build up in confined spaces to hazardous concentrations.

## 11 Toxicological Information

If inhaled in excessive quantities over a prolonged period or tended period, respirable dust can constitute a long term nealth hazard.

## 12 Ecological Information

## Environmental Assessment

When used and disposed of as intended, no adverse environmental effects are foreseen. Aggregates are naturally occurring minerals.

## Mobility

Aggregates are non volatile materials that will sink in water and form a solid layer on the surface of the ground.

## Persistance and Degradability

Aggregates are resistant to degradation and will persist in the environment.

## Ecotoxicity

Not expected to be toxic to aquatic organisms.

## 13 Disposal Considerations

Likely Residues / Waste Product None.

## Safe Handling of Residues / Waste Product

Aggregates are inert but should be disposed of in accordance with local and national legal requirements. See the
Environmental Protection Act 1990 "Duty of Care".

## 14 Transport Information

## Special Carriage Requirements

None - open vehicles to be sheeted to avoid dust nuisance.

## 15 Regulatory Information

This product is NOT classified as dangerous for transport.

## 16 Other Information

## Training Advice

Wear and use of PPE.
Recommended Uses and Applications
Industrial and construction applications.

## Further Information

The Director of Health, Safety and Environment
Breedon Aggregates England Limited
Telephone: (01332) 694010
Key Data Used to Compile Data Sheet
HSE Guidance Note EH40/2007
PPE Regulations 1992
COSHH Regulations 2002 (fifth edition) 2005
Environmental Protection Act 1990
HSE Crystalline Silica EH59

If you have purchased this product for supply to a third party for use at work, it is your duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet.

If you are an employer, it is your duty to tell your employees and others who may be affected of any hazards described in this sheet and any of the precautions which should be taken.

Further copies of this Safety Data Sheet may be obtained from either Breedon Aggregates England Limited or Breedon Aggregates Scotland Limited.



## Alex Butter Landscaping Admin

## From:

Redacted
Sent: 05 November 2018 14:52
To:
Alex Butter Landscaping Admin
Subject:
Re: Shell Bay, Elie

Hi I would recommend a cement content of $330 \mathrm{~kg} / \mathrm{m} 3$
Air entrainment 3-5\%
Maximum dose of plasticiser.

If this is tidal would you require rapid set.

Hope this helps.

Cheers

Kind Regards.
Redacted
Ftm Ironmix Concrete
Redacted
www.ironmix.co.uk

Sent from my iPhone


