



ESSO Petroleum Company Limited

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# ENVIRONMENTAL REVIEW

Proposed Works to the River Clyde Boundary Wall at the Former ESSO Fuel Distribution Terminal, Bowling



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Proposed Works to the River Clyde Boundary Wall at the Former ESSO Fuel Distribution Terminal, Bowling

**RESTRICTED**

**PROJECT NO. 70032892**

**DATE: DECEMBER 2018**

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RESTRICTED



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# 1 INTRODUCTION

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## 1.1 PROJECT BACKGROUND

In January 2018, Esso submitted a Planning Application (Planning Reference DC18/13) to West Dunbartonshire Council for 'the voluntary remediation of part of the former Bowling Fuel Distribution Terminal'. Full details of the application can be accessed using the following link <https://www.west-dunbarton.gov.uk/uniform/dcdisplayfull.asp?vUPRN=DC18%2F013&vPassword=&View1=View>. The location of the proposed works is part of a former fuel distribution terminal which was decommissioned in the 1990's. The Bowling site extends to approximately 63 hectares in totality comprises:

- 41 hectares terrestrial
- 22 hectares a combination of the foreshore of the River Clyde and Milton Island.

The application relates to the voluntary remediation of the remaining areas of the Bowling site where residual hydrocarbon impact is present from historical operations. The remediation is proposed in anticipation of the future sale of the Bowling site to West Dunbartonshire Council to make the whole site suitable for generic commercial end use (and is conditional upon achieving the sale). The scope of remediation is based upon the findings of detailed human health and Water Environmental Risk Assessments and discussions with the Scottish Environmental Protection Agency & West Dunbartonshire Council.

As part of technical work to finalise the scope of the remediation activities, it has been determined that removal of hydrocarbon impacts on the land side of the site would be best facilitated by the installation of a short section of sheet pile wall immediately adjacent to the seaward side of the existing river wall (please see Section 2.2 below for full details of the Proposed Works). The area of the sea wall installation is hereafter referred to as 'the Site'.

West Dunbartonshire Council wish to purchase the property from Esso. The subsequent purchaser of the property (or its developer) will be entirely responsible for all consents, permits, studies, engineering works and the infrastructure / construction required for its futures proposals for the Bowling site. An entirely different planning application is scheduled to be submitted for the future redevelopment of the Bowling site. Esso's planning application is restricted to remediation works which will leave the Bowling site at an appropriate standard for generic commercial end use, at nominally existing land levels, and is NOT related to any future redevelopment of the Bowling site.

## 1.2 SCOPE OF REPORT

The report considers the proposal in the context of The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (The EIA Regulations) with reference to other potential environmental licences and has been prepared to support the request for a screening opinion from the Regulator. A description of the proposed works and site setting are summarised in Section 2 of this report. Section 3 considers the EIA Regulations in the context of our proposal, and other possible environmental related licence requirements. Section 4 provides a summary review (by topic area) on the potential effects of the development on the environment, the potential for significant effects on the environment and mitigation to be applied. A conclusion is then provided in Section 5 with a summary of our overall position to the significance of any potential environmental effects and proposed mitigation measures.

## 2 SITE SETTING AND PROPOSED DEVELOPMENT

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### 2.1 LOCATION OF SITE

The main remediation is planned within the former Bowling Fuel Distribution Terminal. In terms of the location within West Dunbartonshire a Site Location Plan has been prepared (see Drawing No. 70032892101A). The site of the proposed installation of sheet pile work (which is the subject of this screening request) is along the southern boundary of the part of the Bowling site known as Centrefield. The construction footprint of the new sheet pile wall will be upon partly Esso owned and partly Crown Estates owned land. Esso have secured a contract to purchase the small piece of land required from Crown Estates. The location of the proposed works is identified on Drawing No. 70032892\_601 Proposed Sheet Pile Wall Centrefield Sea Wall.

The area surrounding the site<sup>1</sup> where the proposed installation of sheet pile will be undertaken is the remainder of the former terminal (to the North) and the River Clyde (to the South).

The area surrounding the wider Bowling site comprises:

- transport infrastructure (the A82 road, and the rail line to Hellensburgh to the North);
- vacant land (Scotts Yard to the East); and,
- mudflats to the West

The nearest residential properties to the area where the proposed installation of sheet pile work will take place are the Littlemill Apartments located approximately 380m to the northeast; beyond the railway line.

The proposed sheet pile work also falls within the wider intertidal zone of the Clyde estuary which contains the following environmental designations:

- Inner Clyde Site of Special Scientific Interest (SSSI);
- Special Protection Area (SPA); and
- Ramsar

### 2.2 PROPOSED WORKS IN RIVER CLYDE

The proposed work steps are shown on Drawing No. 70032892\_601 Proposed Sheet Pile Wall Centrefield Sea Wall and will step up to a maximum of 1.5m over the existing wall into the river bed. This area does not 'dry out' out low tide and thus no foreshore is exposed. The 170m long piling section is part of the remediation works, and is required to enable the removal of the existing relieving platform, including the removal of potential impacts behind and below the existing wall structure. Once excavations are complete, the area will be backfilled with clean treated materials back to existing topographical levels. The sheet pile wall installed will replace the existing and be finished to existing topographical levels, parts of the former pile wall will remain in-situ behind the new.

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<sup>1</sup> 'The Site' refers to the sheet pile area only, and does not include the wider Bowling site.



In terms of the size of the proposed works, the area does not exceed 1 hectare and are expected to be predominantly land based in order to avoid impacts on the marine environment. There will be no impact piling as the works will be utilizing non- vibratory piling rigs.

## 3 ENVIRONMENTAL LICENCES

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### 3.1 MARINE LICENCE REQUIREMENTS

A Marine Licence from the Scottish Ministers is required if organisations intend on carrying out certain acts in the Scottish marine area (i.e. below the mean high-water springs mark). These acts can include:

- The deposit of substances or objects into the sea or onto the sea bed;
- The removal of substances or objects from the sea bed;
- Construction, alteration and improvement works;
- Dredging; and
- The deposit or use of explosives.

The proposed works would result in construction works within the marine environment, and would thereby require a Marine Licence to be submitted to Scottish Ministers.

### 3.2 ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS

The primary legislation relating to potential environmental impact of development projects is split between works above and below Mean High Water Springs and is implemented by the relevant Local Authority and Marine Scotland respectively:

- The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017; and
- The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017.

For projects which fall within Schedule 1 of these Regulations the developments are automatically considered an EIA Project. If the works fall within Schedule 2 they may be considered as an EIA Project if they are likely to have significant effects on the environment by virtue of factors such as their nature, size and location. Schedules 1 and 2 within both of the above pieces of legislation are the same. We have reviewed the development proposals against the Schedules and have provided below our opinion on the applicability of the individual paragraphs to the works proposed.

It is worth noting the main section of remediation works was previously screened in May 2017 against The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011. West Dunbartonshire Council issued a Screening Opinion under ref. PAN16/006 that confirmed EIA was not required. The Council have recently confirmed the proposed works (the installation of the sheet pile wall) does not change their original position.

#### ***Schedule 1***

The only Paragraph that could have been considered applicable to the development is Paragraph 8 (2) below:

‘Trading ports, piers for loading and unloading connected to land and outside ports (excluding ferry piers) which can take vessels of over 1,350 tonnes’.

However, in this instance, the site is not a trading port and does not for a pier (or a ferry pier), therefore the development is not considered to be Schedule 1 development.



## Schedule 2

Schedule 2 works mean works, other than exempt works, of a description set out in column 1 of Schedule 2 where;

- (a) Any part of the works is to be carried out in a sensitive area; or
- (b) Any applicable threshold or criterion in the corresponding part of column 2 of that table is respectively exceeded or met in relation to the works.

There are a number of sensitive areas within close proximity to the Site, however no development works will impinge into these areas, which satisfied criterion (a) above.

In terms of criterion (b) as noted above, there are two paragraphs within Schedule 2 (Paragraphs 10 (g), and (m)) which could be construed as being applicable to the development, these are defined in Table 1 below (in italics) along with the relevant thresholds. Paragraph 14 of Schedule 2 has been included for completeness. Our opinion is also provided therein.

**Table 1**

Para	Description of Development	Applicable thresholds / Criteria	Opinion
<b>Infrastructure Projects</b>			
<b>10(g)</b>	<i>Construction of harbours and port installations, including fishing harbours (unless included in Schedule 1)</i>	The area of works exceeds 1 hectare	The size of the proposed would fall under 1 hectare in overall area.
<b>10(m)</b>	<i>Costal work to combat erosion and maritime works capable of altering the coast though the construction, for example, of dykes, moles, jetties and other sea defence works excluding the maintenance and reconstruction of such works</i>	All development / All works	Whilst the development works take place within the river environs, the works do not include any features noted in the description and would be of a small-scale nature which would not alter the coast through its construction. The low-key development would not result in any additional impacts over and above the existing situation. The works are proposed for remediation purposes only.
<b>14.</b>	<i>Any change to or extension of development of a description mentioned in schedule 1 (other than a change or extension falling within paragraph 24 of schedule 1) where that</i>	The thresholds and criteria in Column 2 of the paragraph of Schedule 2 as indicated applied to the development as changed or extended are met or	The thresholds as listed under Column 2 of Schedule 2 are not met or exceeded, and therefore would not be a Schedule 2 development.

Para	Description of Development	Applicable thresholds / Criteria	Opinion
	Infrastructure Projects		
	<i>development is already authorised, executed or in the process of being executed.</i>	exceeded and in such a case the change or extension may have significant adverse effects on the environment.	Consequently, the proposal would not have significant adverse effect on the environment.

### Summary

As identified above, the proposed works would fall below the threshold for consideration as a Schedule 2 development, thereby removing any further assessment under the EIA Regulations.

## 4 POTENTIAL ENVIRONMENTAL EFFECTS

Within Table 2 below, we have provided an opinion (by topic area) on the potential effects of the development on the environment, mitigation that could be applied (where relevant) and the potential for significant effects on the environment.

**Table 2**

Topic Area	Potential impact	Potentially Significant Effect	Potential Mitigation (if required)	Additional assessments or work required?	Significant effects following Mitigation?
Water Environment	Impacts on the riverbed from disturbance	No.  The riverbed is subject to dredging and prop wash. The proposed works would be insignificant due to the relatively small area it will impact.  Furthermore, the works will be installed from the land side, on a stable pre-existing support with no piling equipment being installed on the river bed.	None Required	None-  <i>Note that by good practice - a Contractors Method Statement would be applied to these works regardless.</i>	No.
Water Environment	Marine Environment Contamination	Unlikely.  Previous study did not identify NAPL within near surface sediments at locations proximal to the existing river wall.	Contractors to produce method statement to protect the water environment during construction activities by design of operations and use of booms within the River in case of unplanned release.	Method Statement from Contractors agreed as part of Marine Scotland's licensing regime.	No.
Ecology (Marine Mammals)	Construction activity	Possibly.	Ecological clerk of works to watch for marine mammals during any noisy works – if marine mammals observed works cease any noisy works until animal has moved away. General caution and awareness of presence of wildlife by Contractor. Water environment protection is considered the key	SNH have confirmed the potential for them to be occasionally present and therefore ecological clerk will be present – no other survey required.	No.

Topic Area	Potential impact	Potentially Significant Effect	Potential Mitigation (if required)	Additional assessments or work required?	Significant effects following Mitigation?
			mitigation for ecology in the area.		
Ecology (Redshanks)	Construction activity	Possibly.	Protected species, therefore works will be completed outside of the redshank overwintering period or through agreement with SNH.	An ecological inspection would likely be required and recommended. A pre-construction bird survey would be required if the works commence during the breeding season.	No.
Ecology (Otters)	Construction activity	Possibly.	Visible Screening as per Otter report and in accordance with recommendations set out within Otter Report.	Likely – Pre-construction survey 3-6 months prior to commencement of works.	No.
Marine Ecology (underwater noise)	Underwater noise impact on fish or marine mammals	Not expected given specific location of the proposed works and distance to water.	N/A.	No.	No.
Airborne Noise	Piling noise and other construction noise	Possibly although temporary.	The works are relatively small in scale however liaison with local community regarding timing of works would be good practice and piling activities should be carried out in normal working hours.  Minimise duration of works as far as possible.		Temporary effects possible. No long term significant change.
Landscape	Re-configuration of site boundary / River wall	Not expected.	Works are fairly limited in size generally and not readily discernible at distance.	No. Not expected.	No.
Archaeology and Cultural Heritage	Associated piling works	Not expected.	Not considered necessary, however a watching brief by a suitably qualified person / firm could be proposed if required.	No. Not expected	No.
Designated Sites	Negative effects of protected area	No	None required.	No	No.

### ***Environmental Controls***

In order to facilitate the proposed remediation works, we will be utilizing double oil booms and silt booms to prevent unintentional releases to the River Clyde. The area does not dry out at Low water Springs. Additional oil absorbent pads would be deployed and replaced should any unintentional releases occur.

### ***Duration of Works***

Whilst the proposed piling works are in close proximity to a SSSI, SPA and Ramsar, as shown in Figure 1 – Sensitive Areas Illustrating Noise Contour Plots (Worst Case) from Piling Activity, all works fall outside of any sensitive area. Discussions with Scottish Natural Heritage have led to the advice that piling would be preferred during the summer months to avoid impacts on Wintering Redshanks. A watching brief will be undertaken in relation to noise impacts on marine mammals. As such, the piling works are to be curtailed when marine mammals are in the River Clyde and recommenced when they have moved away from the area.

### ***Continued consultation***

A site visit discussing the proposed works has already been held with Scottish Natural Heritage who confirm the acceptability of the works, surveys and mitigations proposed:

- A Habitat Regulations Assessment Stage 2 – Appropriate Assessment has been completed which confirms no adverse impact is expected on the Ecology from the proposed works.
- A Pre-Construction Environmental Management Plan has been prepared that takes into consideration the various mitigations required to properly execute the works.

### ***Further Controls***

The above mitigation measures could also be controlled through the marine licence and/or planning permission (as appropriate), to be finalised by the remediation contractor.

## 5 SUMMARY OF OPINION

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In the above environmental review, we have noted the proposed works do not fall within the definition of Schedule 2 development as no part of works takes place within a sensitive area and scale of works do not exceed the criteria set out at paragraph(s) 10(g)(m) of Schedule 2 of the EIA Regulations. In any event we have considered the potential for the development to result in significant effects on the environment with, and without, mitigation in place (as summarised in Table 2). Given the relatively small scale of the development, its location, the method of construction and the availability of fairly standard construction mitigation, we do not consider this project to result in significant adverse effects on the environment provided relevant mitigation measures are adopted.

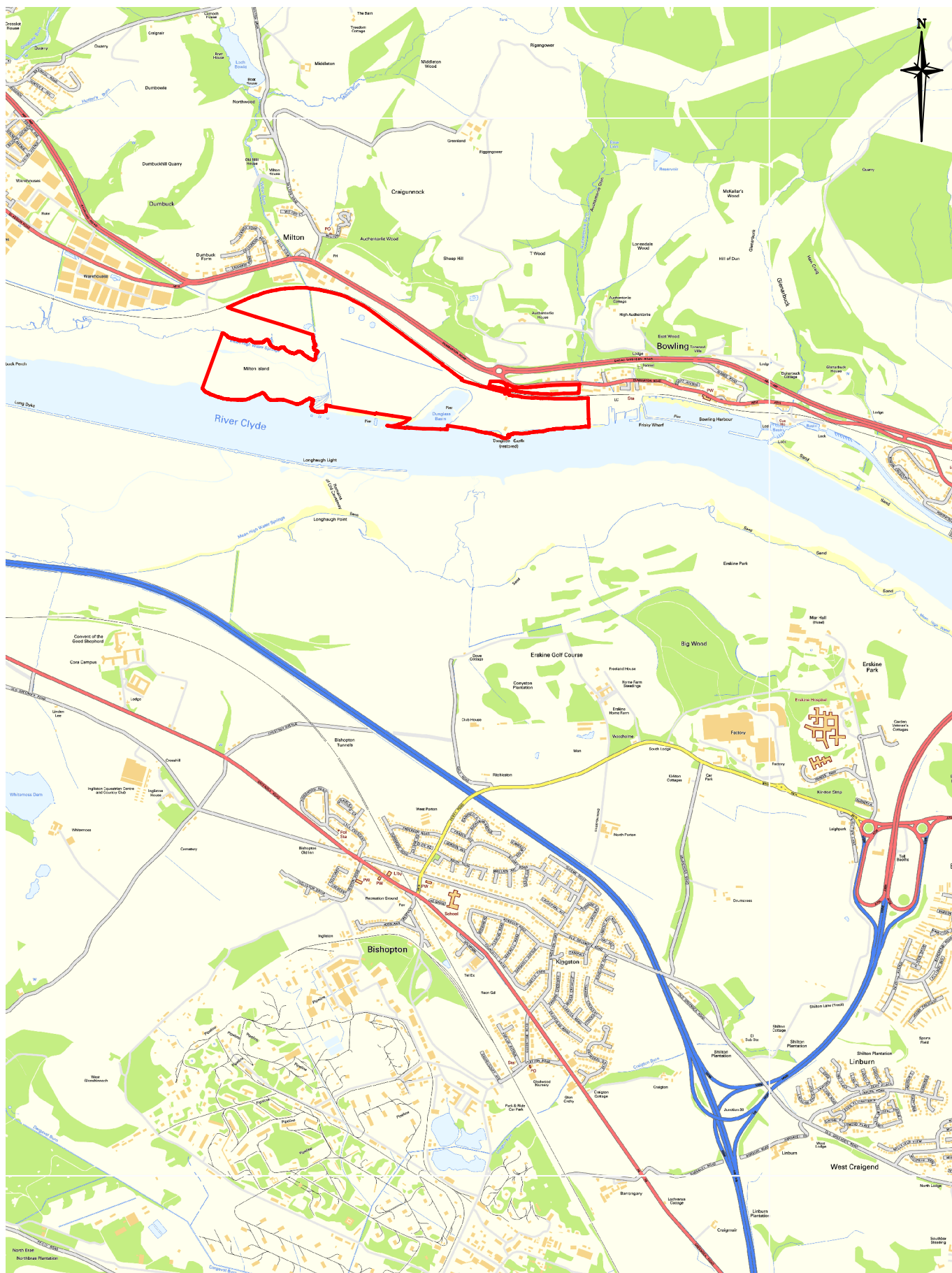
We have included a draft Construction Environmental Management Plan (CEMP), which takes into account the relevant mitigation measures to be prepared for the development. The CEMP is a working document and will be completed in agreement with Marine Scotland.

## 6 APPENDICES

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**Drawing No. 70032892 101A SITE LOCATION PLAN**





# KEY

— SITE BOUNDARY

Contains Ordnance Survey data © Crown copyright and database right (2018)



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Client/Project:

**ESSO PETROLEUM  
COMPANY LIMITED**  
**FORMER ESSO TERMINAL, BOWLING**  
Title: **SITE LOCATION PLAN**

Drawn: <b>Re</b>	Checked: <b>R</b>	
Designed: <b>R</b>	Approved: <b>R</b>	
Date: 29/11/2018	Scale: 1:25,000	A4 Sheet:
Project Number:	Drawing Number:	Revision:
70032892	101	A

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**Drawing No. 70032892\_601 Proposed Sheet Pile Wall Centrefield Sea Wall**

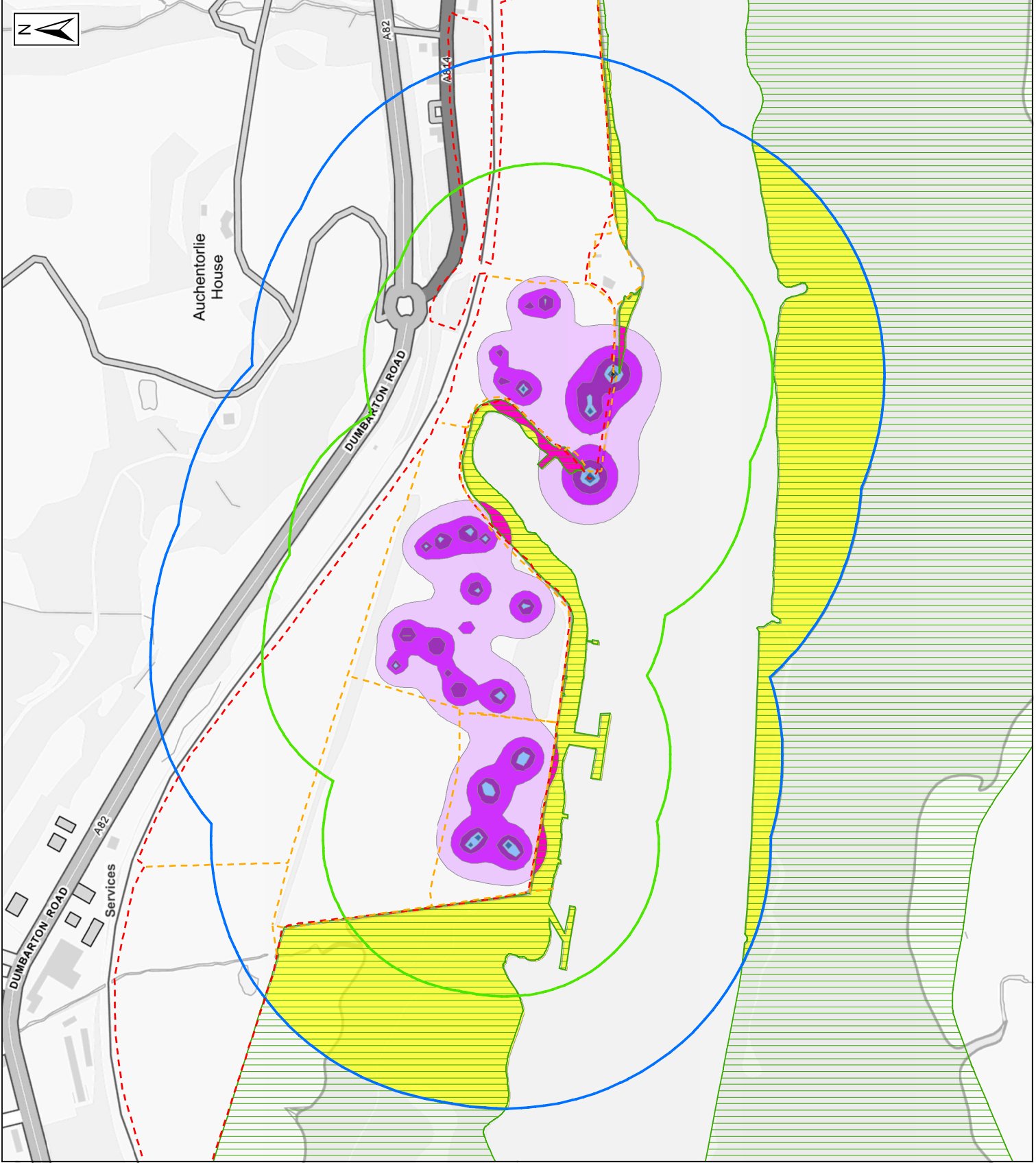


THIS ILLUSTRATIVE DESIGN HAS BEEN PRODUCED BASED UPON THE FOLLOWING ASSUMPTIONS:

1. EXPOSURE CLASS: 30 YEARS
2. EXPOSURE CLASS: 30 YEARS
3. THE VOID BETWEEN NEW AND EXISTING RIVER WALLS SHALL BE FILLED WITH CLASS 6N MATERIAL.

Item	<input checked="" type="checkbox"/>	Checked	<input checked="" type="checkbox"/>
Assigned	<input checked="" type="checkbox"/>	Approved	<input checked="" type="checkbox"/>
Date	17/04/2019	Score AS SHOWN A1	Sheet
Project Number	70032892	Quoting Number	601
		Revision	
		A	

**Figure 1 – Sensitive Areas & Noise Contour Plot (Worst Case)**



- Legend**
- Site Boundary
  - Sub-Division Boundary
  - 150m Disturbance Area
  - 300m Disturbance Area
  - Special Protection Area
  - SPA area affected by Noise Model
  - SPA area affected by 300m Disturbance Zone
  - L<sub>Aeq,1h</sub>
- |         |
|---------|
| < 70 dB |
| > 70 dB |
| > 75 dB |
| > 80 dB |
| > 85 dB |
| > 90 dB |
| > 95 dB |



Project:

Esso Bowling

Title:

Figure 1  
Sensitive Areas Illustrating Noise  
Contour Plots (Worst Case) from Piling  
Activity

Date: 28/11/2018  
Drawn: **P**

CHECKED: **P**

Scale: 4.913 @ A3  
Approved: **P**



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