Dunmore Drainage

AECOM Marine Licence Application

Falkirk Council

Rev0

1 September 2022

Delivering a better world

marinescotland

T: +44 (0)1224 295579
E: ms.marinelicensing@gov.scot

The Scottish Government
Riaghaltas na h-Alba

Marine Licence Application for Construction Projects

Version 1.0

Marine (Scotland) Act 2010

Marine Scotland, 375 Victoria Road, Aberdeen, AB11 9DB
http://www.gov.scot/Topics/marine/Licensing/marine

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°55.555'N 002°22.222'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°55'44''N 2°22'11''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.jsp 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 (1st June to 15th 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 (10Hz to 10kHz) impulsive noise. Activities where this type of noise is produced include seismic airguns, other geophysical surveys (<10kHz), 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 details 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.

Marine Licence Application for Construction Projects

Version 1.0

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 ☐ NO ■

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

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.

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.

Signature Redacted

Date 23/01/23

Name in BLOCK LETTERS JAMIE SCOTT

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: Principal Engineer Initials: Gary Surname: McGregor

Trading Title (if appropriate): Falkirk Council

Address: Municipal Buildings, West Bridge Street, Falkirk FK1 5RS

Name of contact (if different):

Telephone No. (inc. dialing code): Redacted

Email: Gary.McGregor@falkirk.gov.uk

Statutory Harbour Authority? YES ☐ NO ■

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)

Title: Principal Civil Engineer Initials: Jamie Surname: Scott

Trading Title (if appropriate): AECOM

Address: 1 Tanfield, Edinburgh EH3 5DA

Name of contact (if different):

Telephone No. (inc. dialing code): Redacted

Email: jamie.scott@aecom.com

3. Payment

Enclosed Cheque ☐ Invoice ■

Contact and address to send invoice to:

Applicant ■ Agent ☐ Other ☐

If **OTHER**, please provide contact details:

Title: Initials: Surname:

Address:

Email:

4. Application Type

Is this application for a new construction site or an existing construction site:

New Site ☒ 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):

Construction of a new surface water drainage outfall Downstream outfall will have an HDPE flap valve installed to prevent backflow during high tide Precast reinforced concrete headwall H10C A Althon or similar approved by designer Rock Armour (average diameter 300mm) line projected in line with wing walls and gradient to suit local ground profile

(b) Total area of the proposed works (in square metres):

10 m^2

(c) Proposed start date **(Target duration for determination of a marine licence application is 14 weeks):**

February 2023

(d) Proposed completion date:

July 2023

(e) Cost of the works seawards of the tidal limit of MHWS:

£25,000

(f) Location:

Dunmore, Falkirk

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	°	0	5	.	1	4	3	' N	-	0	3	°	4	6	.	7	6	1	' W
5	6	°	0	5	.	1	4	3	' N	-	0	3	°	4	6	.	7	7	3	' W
5	6	°	0	5	.	1	4	8	' N	-	0	3	°	4	6	.	7	7	3	' W
5	6	°	0	5	.	1	4	8	' N	-	0	3	°	4	6	.	7	6	1	' W
		°			.				' N				°			.				' W
		°			.				' N				°			.				' W
		°			.				' N				°			.				' W
		°			.				' N				°			.				' W
		°			.				' N				°			.				' W
		°			.				' N				°			.				' W

(g) Is the project located within the jurisdiction of a statutory harbour authority?

YES ☐ NO ■

If **YES**, please specify statutory harbour authority:

(h) Method statement including schedule of work (continue on separate sheet if necessary):

The following is an example of how the works could be installed. It should be noted that it is for the contractor to determine and finalise their proposed methodology and, as such, this example would be subject to change:

The outfall location is finalised within the perimeter area stated within this application. The outfall pipe will be installed via trench excavation until it reaches the outfall location. At outfall location some minor earthworks will be required to clear any vegetation and profile the ground to suit the proposed solution. The precast headwall will be delivered to site and is lifted in place with site plant. This will be placed on an in-situ bed of concrete, which will be installed at a suitable tide to prevent washout. The pipe work and flapvalve will be connected up following the headwall placement. Finally the rock armour is delivered to site and placed accordingly with an excavator.

Works duration in this area of the works would be anticipated to be 1-2 weeks.

All works are likely to be carried out from land.

(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):

None

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):

	Deposits		Removals	
Type of Deposit/Removal	Description	Quantity & Dimensions (metric)	Description	Quantity & Dimensions (metric)
Steel/Iron		No.		No.
		Dimensions		Dimensions
		Weight (kg/tonnes)		Weight (kg/tonnes)
Timber		No.		No.
		Dimensions		Dimensions
		Weight (kg/tonnes)		Weight (kg/tonnes)
Concrete	Headwall	1 No.		No.
		Dimensions 1910*1980*1250		Dimensions
		2000kg Weight (kg/tonnes)		Weight (kg/tonnes)
Plastic/Synthetic	Flap-valve (HDPE)	1.131 m^2		m^2
Clay (< 0.004 mm)		Volume (m^3)		Volume (m^3)
		Weight (kg/tonnes)		Weight (kg/tonnes)
Silt (0.004 ≤ Silt < 0.063 mm)		Volume (m^3)		Volume (m^3)
		Weight (kg/tonnes)		Weight (kg/tonnes)
Sand (0.063 ≤ Sand < 2.0 mm)		Volume (m^3)		Volume (m^3)
		Weight (kg/tonnes)		Weight (kg/tonnes)
Gravel (2.00 ≤ Gravel < 64.0 mm)	Class A Material for pipe surround	2 Volume (m^3)		Volume (m^3)
		Weight (kg/tonnes)		Weight (kg/tonnes)
Cobbles (64.0 ≤ Cobbles < 256.0 mm)		Volume (m^3)		Volume (m^3)
		Weight (kg/tonnes)		Weight (kg/tonnes)
Boulders (≥ 256.0 mm)	Armour stones (300mm diameter)	8.92 Volume (m^3)		Volume (m^3)
		23,192kg Weight (kg/tonnes)		Weight (kg/tonnes)

Pipe	Twinwall HDPE Pipe	6m Length (m) External 600mm Diameter (cm/m)		Length (m) External Diameter (cm/m)
Other (please describe below):				
Geotextile	Non-woven geotextile pipe surround	10m2 (squared meters)		

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

All materials to be installed will be delivered by road

(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):

tonnes

Nature of substance(s) or object(s) (e.g. sand, silt, gravel etc.):

Source (if sea dredged state location of origin)

Particle size:

Have the substance(s) or object(s) been chemically analysed? **YES** ☐ **NO** ■
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/Iron		No.
		Dimensions
		Weight (kg/tonnes)
Timber		No.
		Dimensions
		Weight (kg/tonnes)

Concrete		No.
		Dimensions
		Weight (kg/tonnes)
Plastic/Synthetic		m^2
Clay (< 0.004 mm)		Volume (m^3)
		Weight (kg/tonnes)
Silt (0.004 ≤ Silt < 0.063 mm)		Volume (m^3)
		Weight (kg/tonnes)
Sand (0.063 ≤ Sand < 2.0 mm)		Volume (m^3)
		Weight (kg/tonnes)
Gravel (2.00 ≤ Gravel < 64.0 mm)		Volume (m^3)
		Weight (kg/tonnes)
Cobbles (64.0 ≤ Cobbles < 256.0 mm)		Volume (m^3)
		Weight (kg/tonnes)
Boulders (≥ 256.0 mm)		Volume (m^3)
		Weight (kg/tonnes)
Pipe		Length (m)
		External Diameter (cm/m)
Other (please describe below):		

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 ☐ NO ■

If **YES**, please specify nature of substance(s) or object(s) (e.g sand, gravel, silt, clay, rock etc.):

(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 (10Hz to 10kHz) impulsive noise be produced by the project? YES ☐ NO ■

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?

C ent s the Fa k rk Counc , who have consent ng powers over p ann ng etc. but have no Consent ng Powers to those requ red for th s project.

Note that Dunmore s a conservat on v age and Fa k rk Counc are correspond ng w th our Deve opment Management department w th regards to th s.

10. Scotland's National Marine Plan

Have you considered the application with reference to Scotland's National Marine Plan? YES ■ NO ☐

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:

GEN 3 - Project is to allow increased surface water drainage capacity to mitigate against flooding of local properties
GEN 5 - Project is to allow increased surface water drainage capacity to mitigate against flooding
GEN 7 - Rock armour used for anti-scour to maintain a natural coastal aesthetic
GEN 12 - In situ concrete avoid to eliminate risk of wash out
GEN 13 - Methods proposed do not produce any significant noise

If **NO**, please provide an explanation of why you haven't considered the National Marine Plan?

11. Pre-Application Consultation

Is the application subject to pre-application consultation, under The Marine Licensing (Pre-application Consultation) (Scotland) Regulations 2013? YES ☐ NO ■

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:

We have consulted with Marine Scotland to confirm that there was no requirement for EIA Screening. Correspondence can be supplied on request.

13. Environmental Assessment

(a) Does the project fall under Annex I or II of the EIA Directive?

Annex I ☐ Annex II ☐ Neither ■

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 YES ☐ NO ■
for any other EIA regulator (e.g local authority) YES ☐ NO ■

14. Associated Works

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

None

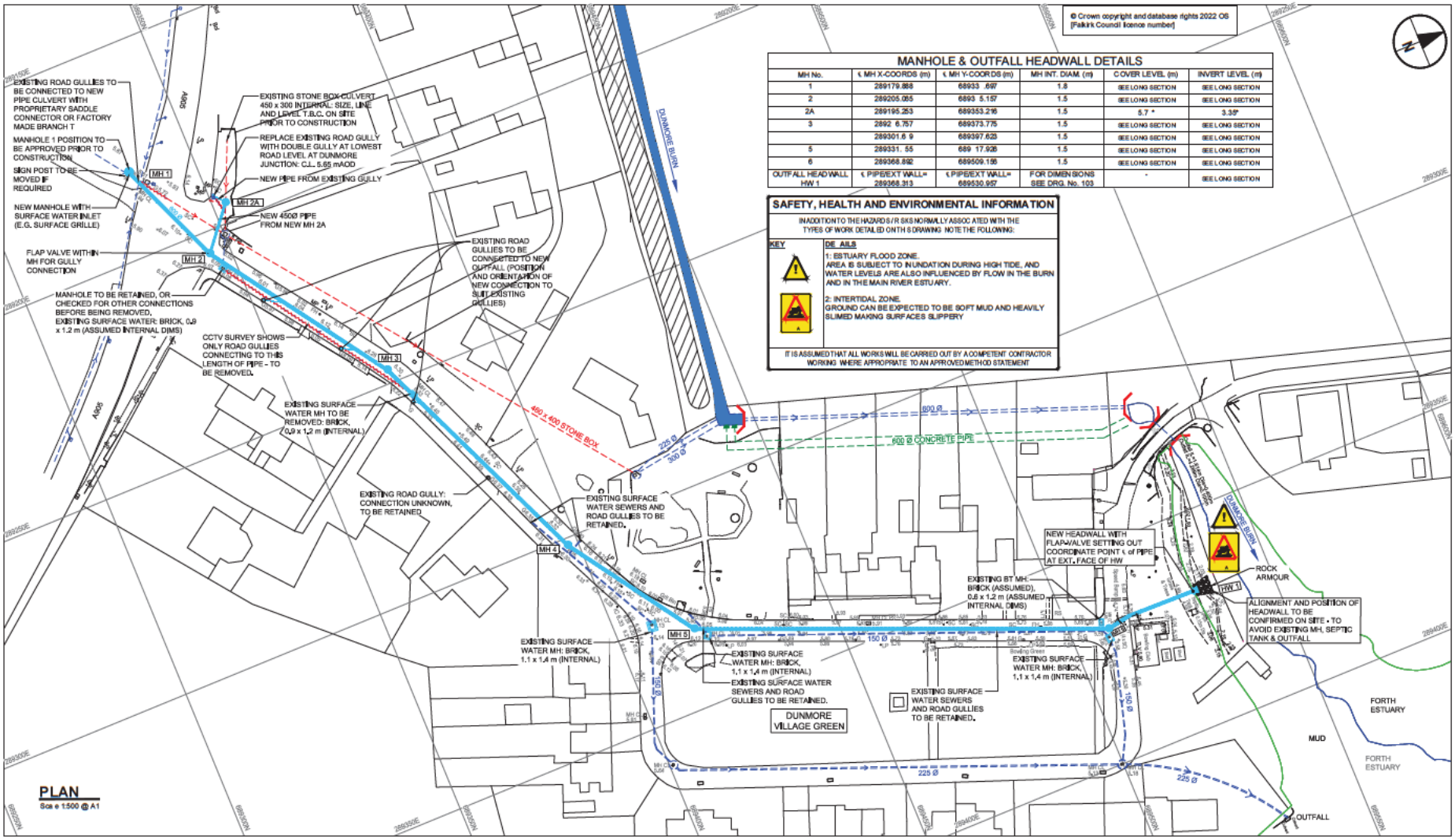
Appendix A - Drawings

60602044-SHT-30-DUNM-C-0102

DUNMORE VILLAGE NEW OUTFALL GENERAL ARRANGEMENT PLAN & LONGITUDINAL SECTION

60602044-SHT-30-DUNM-C-0105

HEADWALL & 600mm FLAP VALVE



MANHOLE & OUTFALL HEADWALL DETAILS

MH No.	℄ MH X-COORDS (m)	℄ MH Y-COORDS (m)	MH INT. DIAM. (m)	COVER LEVEL (m)	INVERT LEVEL (m)
1	289179.888	68933 .697	1.8	SEE LONG SECTION	SEE LONG SECTION
2	289205.055	6893 5.157	1.5	SEE LONG SECTION	SEE LONG SECTION
2A	289195.253	689353.216	1.5	5.7 *	3.35*
3	2892 6.757	689373.775	1.5	SEE LONG SECTION	SEE LONG SECTION
	289301.6 9	689397.623	1.5	SEE LONG SECTION	SEE LONG SECTION
5	289331. 55	689 17.926	1.5	SEE LONG SECTION	SEE LONG SECTION
6	289368.892	689509.156	1.5	SEE LONG SECTION	SEE LONG SECTION
OUTFALL HEADWALL HW 1	℄ PIPE/EXT WALL= 289368.313	℄ PIPE/EXT WALL= 689530.957	FOR DIMENSIONS SEE DRG. No. 103	-	SEE LONG SECTION

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS / RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING NOTE THE FOLLOWING:

KEY

DETAILS

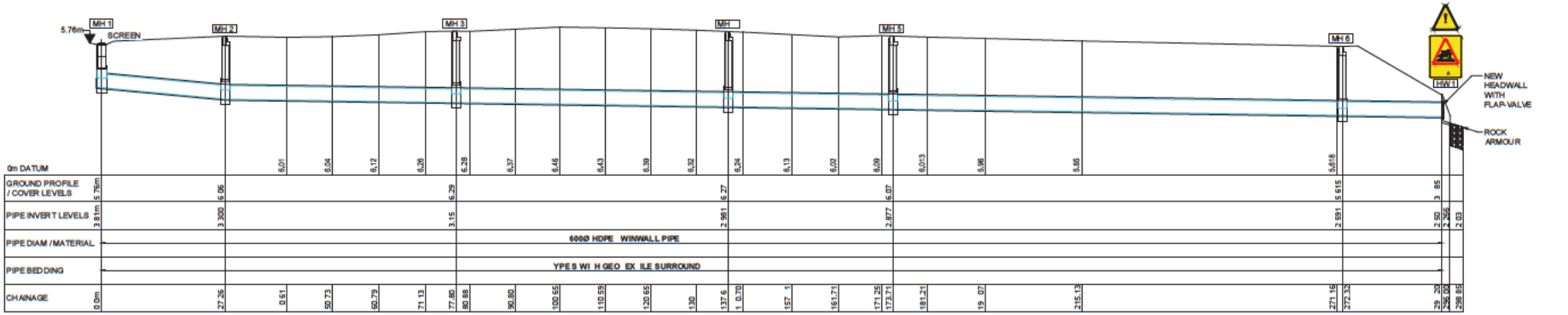
1: ESTUARY FLOOD ZONE.
AREA IS SUBJECT TO INUNDATION DURING HIGH TIDE, AND WATER LEVELS ARE ALSO INFLUENCED BY FLOW IN THE BURN AND IN THE MAIN RIVER ESTUARY.

2: INTERTIDAL ZONE.
GROUND CAN BE EXPECTED TO BE SOFT MUD AND HEAVILY SLIMED MAKING SURFACES SLIPPERY

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING WHERE APPROPRIATE TO AN APPROVED METHOD STATEMENT

PLAN

Scale 1:500 @ A1



LONGITUDINAL SECTION

Scale HORZ.1:500 & 1:100 VERT @ A1

0 2.5 5 m
1:100 @ A1 SIZE

0 12.5 25 m
1:500 @ A1 SIZE

AECOM

PROJECT

DUNMORE FLOOD STUDY

CLIENT

FALKIRK COUNCIL

CONSULTANT

AECOM
1 Tanfield
Edinburgh
EH3 5DA
T 0131 301 8600
www.aecom.com

NOTES

1. ALL DIMENSIONS IN metres (m). DO NOT SCALE FROM THIS DRAWING. ALL LEVELS IN metres AND REDUCED TO ORDNANCE DATUM.
2. DRAWING TO BE READ AT A1 SIZE.
3. SPECIFICATION: WORKS TO BE CARRIED OUT IN ACCORDANCE WITH MCDHW VOLUME 1 SPECIFICATION FOR HIGHWAY WORKS, SERIES 500 DRAINAGE AND SERVICE DUCTS. SERIES 1900 PROTECTION OF STEELWORK AGAINST CORROSION.
4. ROAD REINSTATEMENT TO BE AS PER: SPECIFICATION FOR THE REINSTATEMENT OF OPENINGS IN ROADS FOURTH EDITION (SCOTLAND).
5. WORKS AS STATED, ALL OTHER FEATURES SHOWN ARE EXISTING AND ARE TO BE RETAINED UNLESS NOTED OTHERWISE.
6. CONTRACTOR TO CARRY OUT TRIAL PITS / EXPLORATORY EXCAVATION AT THE OUTFALL LOCATION TO CONFIRM EXISTING OUTFALL LINE AND POSITION.
7. * DENOTES ESTIMATED LEVELS TO BE CONFIRMED ON SITE.

LEGEND

- EXISTING SURFACE WATER
- NEW OUTFALL PIPE
- NEW GULLY PIPELINE
- NEW MANHOLES
- EXISTING PIPE TO BE REMOVED

ISSUE/REVISION

C02	28.07.22	TENDER REVISION
C01	19.05.2022	TENDER
0	29.03.2022	DRAFT ISSUE
I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

60602044

SHEET TITLE

DUNMORE VILLAGE
NEW OUTFALL
GENERAL ARRANGEMENT PLAN
& LONGITUDINAL SECTION

SHEET NUMBER

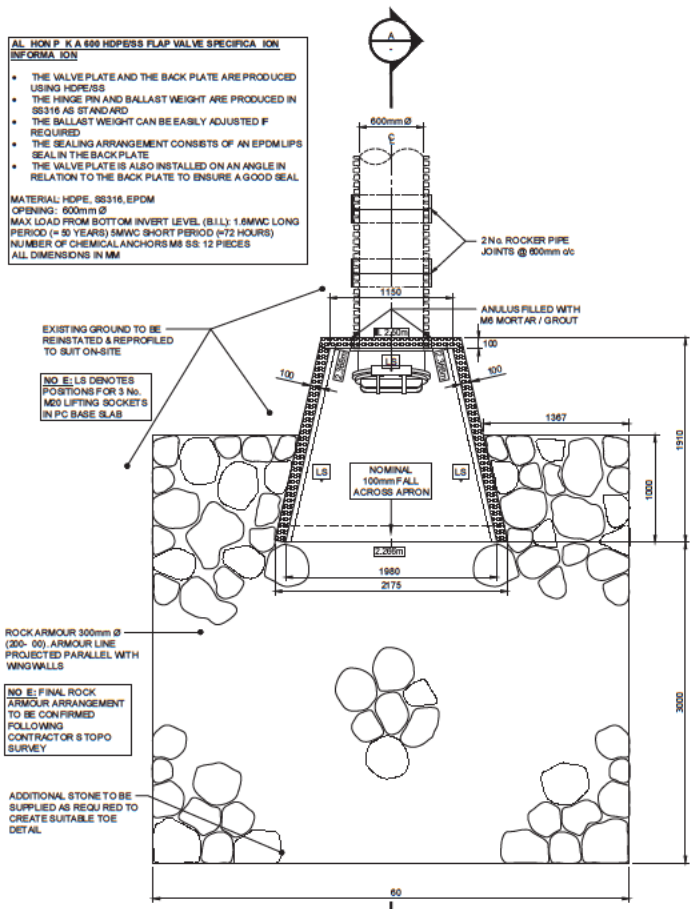
60602044-SHT-30-DUNM-C-0102

Project Management Initials:GH Designer: WR Checked: WR Approved: RM Drawn: MG ISO A1 59 mm x 8 mm
Revision: C01
Last Plotted: 2022-07-28 (2022-07-28)
Last saved by: ROBBIE.GREENOCK
Filename:

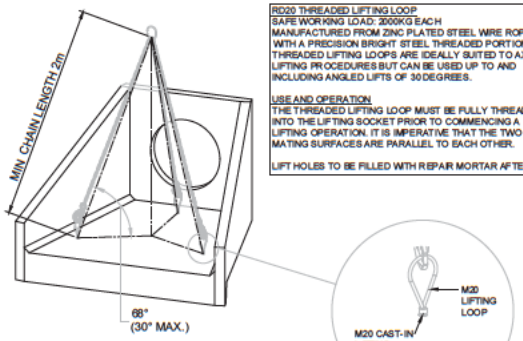
ALTHON PTK A 600 HDPE/SS FLAP VALVE SPECIFICATION INFORMATION

- THE VALVE PLATE AND THE BACK PLATE ARE PRODUCED USING HDPE/SS
- THE HINGE PIN AND BALLAST WEIGHT ARE PRODUCED IN SS316 AS STANDARD
- THE BALLAST WEIGHT CAN BE EASILY ADJUSTED IF REQUIRED
- THE SEALING ARRANGEMENT CONSISTS OF AN EPDM LIPS SEAL IN THE BACK PLATE
- THE VALVE PLATE IS ALSO INSTALLED ON AN ANGLE IN RELATION TO THE BACK PLATE TO ENSURE A GOOD SEAL

MATERIAL: HDPE, SS316, EPDM
OPENING: 600mm Ø
MAX LOAD FROM BOTTOM INVERT LEVEL (B.I.L): 1.6MWC LONG PERIOD (= 50 YEARS) 5MWC SHORT PERIOD (=72 HOURS)
NUMBER OF CHEMICAL ANCHORS M8 SS: 12 PIECES
ALL DIMENSIONS IN MM



HEADWALL PLAN
Scale 1:25



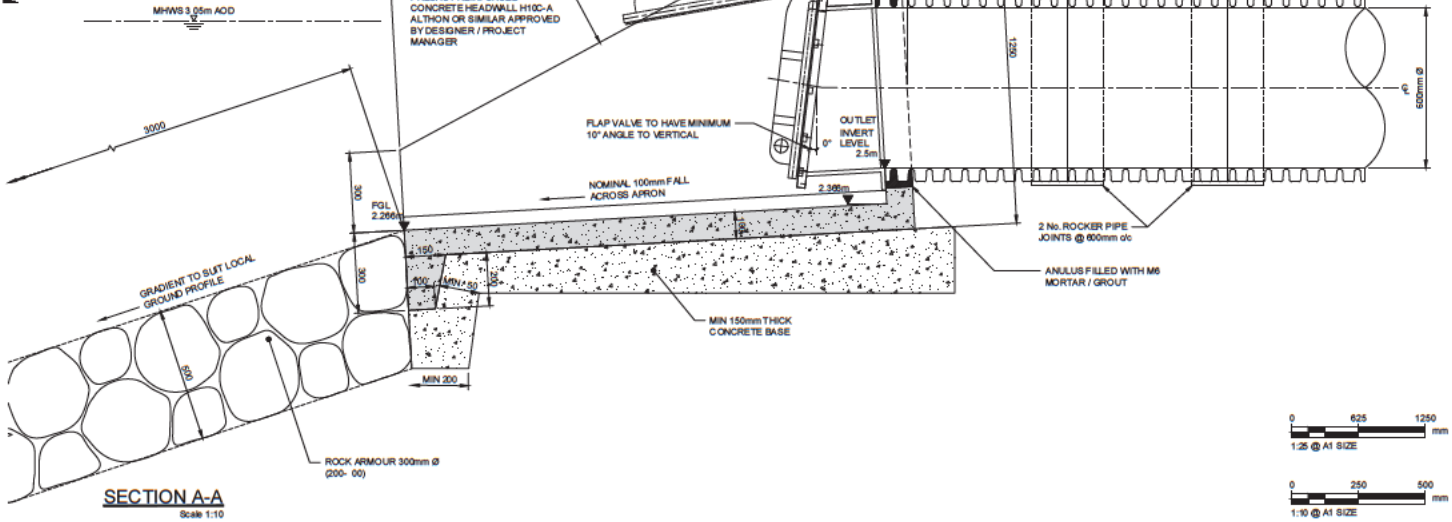
INDICATIVE LIFTING ARRANGEMENT
N.T.S.

DETAIL 1

RD20 THREADED LIFTING LOOP
SAFE WORKING LOAD: 2000KG EACH
MANUFACTURED FROM ZINC PLATED STEEL WIRE ROPE WITH A PRECISION BRIGHT STEEL THREADED PORTION. THREADED LIFTING LOOPS ARE IDEALLY SUITED TO AXIAL LIFTING PROCEDURES BUT CAN BE USED UP TO AND INCLUDING ANGLED LIFTS OF 30 DEGREES.

USE AND OPERATION
THE THREADED LIFTING LOOP MUST BE FULLY THREADED INTO THE LIFTING SOCKET PRIOR TO COMMENCING A LIFTING OPERATION. IT IS IMPERATIVE THAT THE TWO MATING SURFACES ARE PARALLEL TO EACH OTHER.

LIFT HOLES TO BE FILLED WITH REPAIR MORTAR AFTER USE



SECTION A-A
Scale 1:10

NOTES (CONTINUED)

6. MANUFACTURE
MANUFACTURE TO BS EN 15258:2008 PRECAST CONCRETE PRODUCTS - RETAINING WALL ELEMENTS, FACTORY PRODUCTION CONTROL
CERTIFICATE NUMBER: 0086-CPR-650 6 & BS EN 13369
TOLERANCES TO BS EN 13369 CLAUSE .3.1.1
FINISHING:

Element Class	Top	Sides	Base	Rear of back wall
	A	A	A	Self – Levelled

MARKING: UNITS SHALL BE INDELIBLY MARKED TO SHOW
MOULD REFERENCE CODE
DE-MOULD DATE
JOB REFERENCE NUMBER & UNIQUE PRODUCT NUMBER
UNIT WEIGHT (KG)

7. DESIGN
CONCRETE DESIGN TO EC2
ALTHON HAVE DESIGNED THE CONCRETE UNITS ONLY, THE SITE CONDITIONS SHOULD BE ASSESSED FOR SUITABILITY BY THE SCHEME DESIGNER
UNITS ARE DESIGNED TO WITHSTAND A VERTICAL LIVE LOAD SURCHARGE OF 10KN/m²
WEIGHT OF SOIL = 18KN/m³
ANGLE OF INTERNAL FRICTION = 30 DEG.
DESIGN LIFE: >50 YEARS

Min Cover	Cover Block Size (mm)	Min Cover Size (mm)	Max Cover Size (mm)
All Faces	33	28	35

Exposure Classification	Exposure Induced by Carbonation	Corrosion Induced by Chloride	Freeze/thaw attack	Chemical attack
All Faces	XC3/4	XD2	XF3	XA2

8. FABRICATION SPECIFICATION
A. MANUFACTURE IAW EN 1090-2 EXC CLASS 1
B. MATERIAL GRADE IS TO BE: BS EN 10025 S275
C. WELDING CARRIED OUT IAW EN 1090-2 PARA 7.5. - 7.5.18
D. ALL FILLET AND BUTT WELDS TO HAVE A MINIMUM THROAT THICKNESS OF 6mm & JOINTS TO BE FULLY WELDED WHERE POSSIBLE.
E. ENSURE VERTICAL FLATS ARE FULLY WELDED BOTH SIDES WHERE POSSIBLE.
F. ALL SHARP EDGES AND BURRS ARE TO BE REMOVED.
G. REMOVE ALL WELD SPLATTER.
H. HOLES BY PUNCHING ARE PERMITTED WITH REAMING.
I. GALVANISING IS CARRIED OUT AFTER FABRICATION TO BS EN ISO 1 61

0 625 1250 mm
1:25 @ A1 SIZE

0 250 500 mm
1:10 @ A1 SIZE

AECOM

PROJECT
DUNMORE FLOOD STUDY

CLIENT
FALKIRK COUNCIL

CONSULTANT
AECOM
1 Tanfield
Edinburgh
EH3 5DA
T 0131 301 8600
www.aecom.com

NOTES

ALL DIMENSIONS IN mm,
ALL MEASUREMENTS ± 1mm,
DO NOT SCALE.
ALL LEVELS IN METRES AND REDUCED TO ORDNANCE DATUM.

1. SPECIFICATION INFORMATION
OPENING IN BACK WALL CAST TO SUIT OUTSIDE DIAMETER OF THE PIPEWORK
INVERT LEVEL OF PIPE CAN BE SET TO YOUR SPECIFICATION

2. HEADWALL INSTALLATION
UNITS SHOULD BE BEDDED ON MINIMUM 150mm OF SEMI-DRY CONCRETE.
SIT THE HEADWALL LEVEL, OR WITH A SLIGHT FALL 1:50 FROM PIPE TO SPILL MOUTH.

3. HANDLING
WEIGHT OF CONCRETE IS BASED ON 2. TONNE/m³ 5% IS RECOMMENDED FOR SIZING LIFTING EQUIPMENT.
ALL LIFTING POINTS SHALL BE USED AS SPECIFIED - ANCHOR POINTS & LOOPS - TOTAL Q'TY: 3
UNIT TO BE LIFTED AS PER LIFTING DIAGRAM

CONCRETE
M X REF: SELF-COMPACTING DC /DS MIX
LIFTING STRENGTH BASED ON 2 CUBES = 20N/mm²
CHARACTERISTIC 28 DAY CUBE STRENGTH = 50N/mm²
CONCRETE PROVIDES DES GN CHEMICAL CLASS (DC) TO SPECIAL DIGEST 1, TABLE F2.

5. REINFORCEMENT
REINFORCEMENT TO BS EN 13369
SCHEDULING, DIMENSIONING, BENDING & CUTTING TO BS8666
CAGE TO BE MACHINE TIED WITH STEEL WIRE

ISSUE/REVISION

C02	21.09.2022	TENDER REVISION
C01	19.05.2022	TENDER
01	07.03.2022	DRAFT ISSUE
I/R	DATE	DESCRIPTION

KEY PLAN

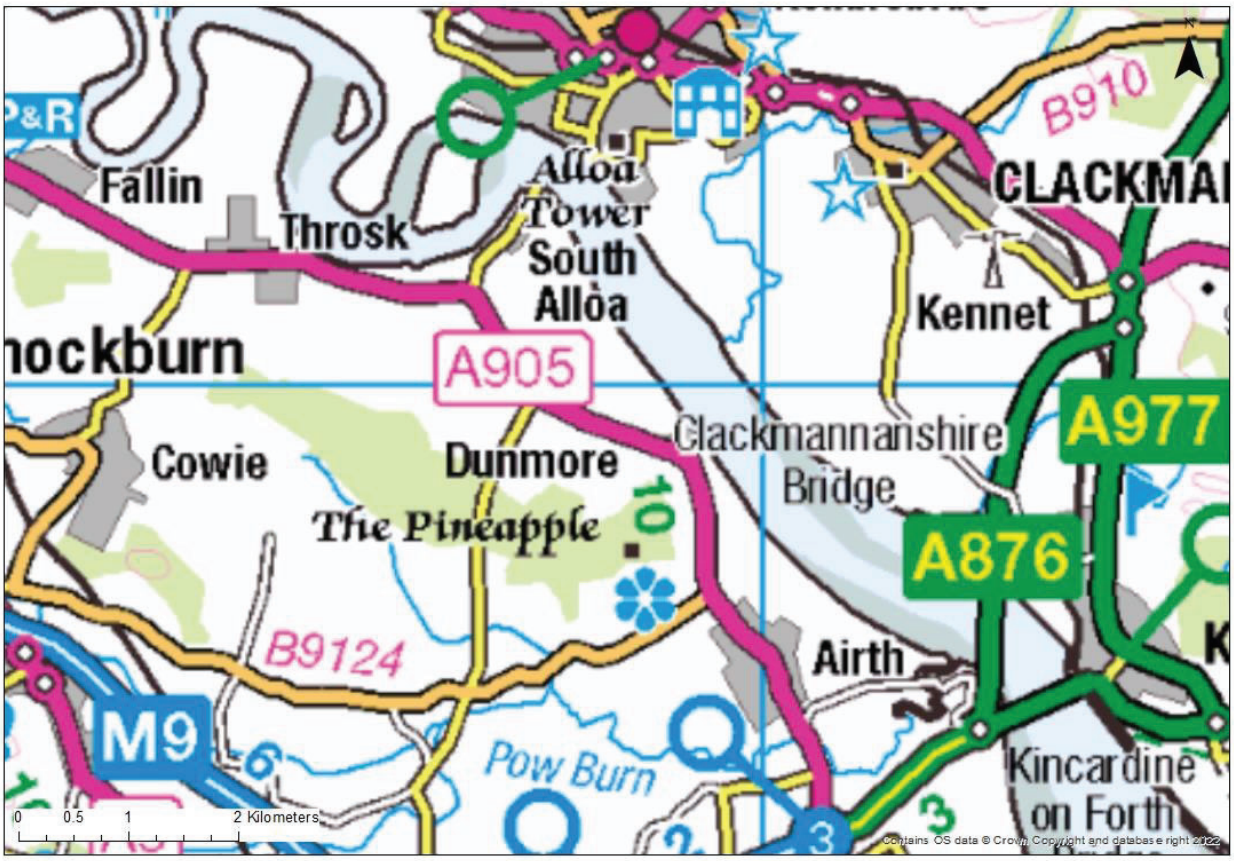
PROJECT NUMBER
60602044

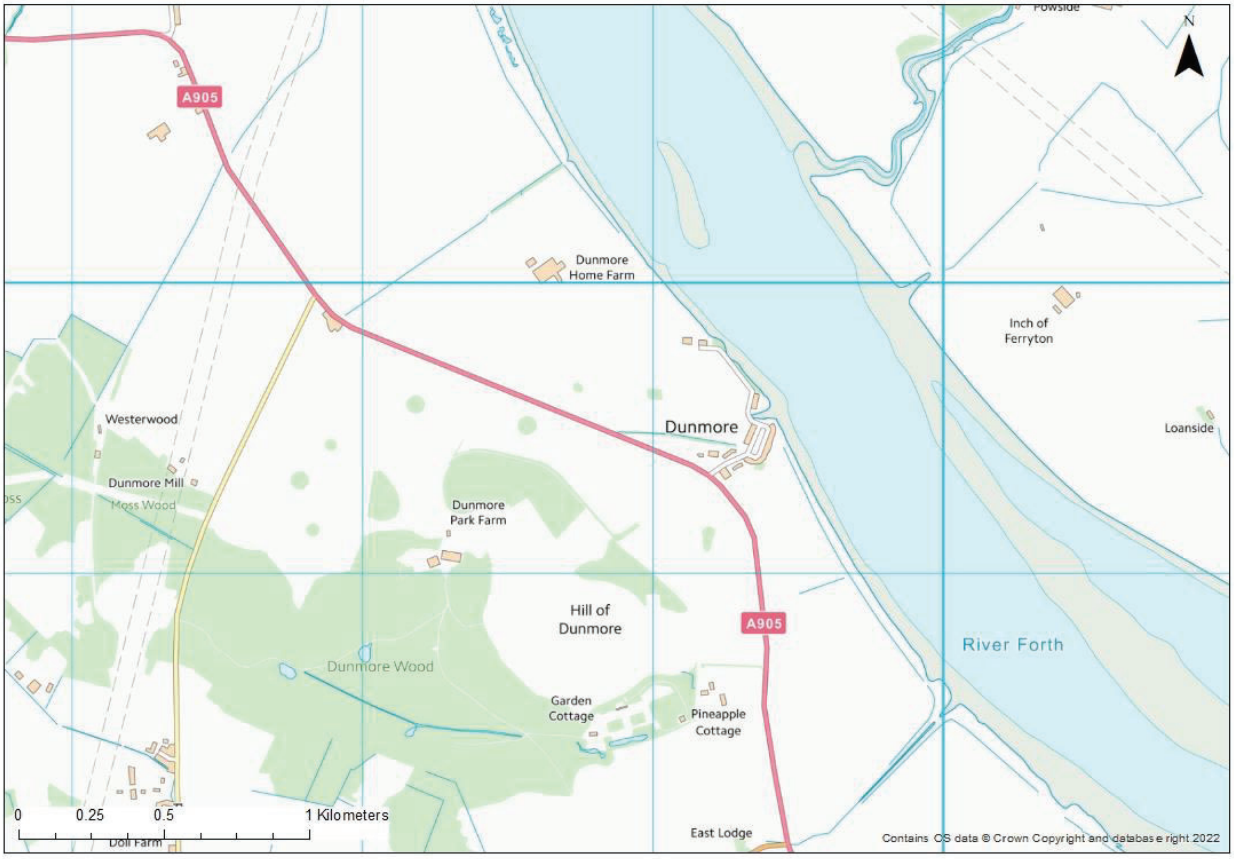
SHEET TITLE
DUNMORE VILLAGE
NEW OUTFALL
HEADWALL & 600mm FLAP VALVE
GENERAL ARRANGEMENT DETAILS

SHEET NUMBER
60602044-SHT-30-DUNM-C-0105

Project Management Initials:GH Designer: WR Checked: WR Approved: RM Drawn: MG ISO A1 59 mm x 8 1mm
Revision: C01
Last Plotted: 2022-09-21
Last saved by: ROBBIE.GREENOCK(2022-09-21)
Filename:

Appendix B – Location Maps





Appendix C – Site Photographs