



**PEMBROKE DOCK MARINE
ENVIRONMENTAL IMPACT
ASSESSMENT
SCOPING REPORT**

**Request for Scoping Opinion under Town
and Country Planning (Environmental Impact
Assessment) (Wales) Regulations 2017 and
Marine Works (Environmental Impact
Assessment) Regulations 2007**

On behalf of Milford Haven Port Authority



Date: June 2018

**Our Ref: 180615 R JPW1115 DW EIA SR
v3**

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1 INTRODUCTION

- 1.1 This Scoping Report has been prepared by RPS on behalf of Milford Haven Port Authority ('MHPA'). It proposes the scope of Environmental Impact Assessment ('EIA') for the Pembroke Dock Marine project which seeks to improve existing facilities at Pembroke Port, Pembroke Dock, Pembrokeshire SA72 6TD. A Site Location Plan is included as **Figure 1**.
- 1.2 Pembroke Dock marine will create a flexible port-related industrial area capable of meeting the needs of the modern blue economy and will be the subject of an outline planning application for the erection of buildings, extension to the slipway and associated development at the port, as well as a Marine Licence application to the Natural Resources Wales Marine Licensing Team (NRW-MLT).
- 1.3 The proposed development falls within Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 ('the EIA Regulations'). When screening Schedule 2 projects, account must be taken of the selection criteria in Schedule 3 of the EIA Regulations. Schedule 3 Paragraph (2)(1) of the regulations lists potentially environmentally sensitive geographical areas likely to be affected by development that should be considered 'in particular' when considering the need for EIA.
- 1.4 The proposed development may have significant effects on the environment by virtue of factors including its size, nature and location. This view was also expressed, informally, by the Local Planning Authority ('LPA'), Pembrokeshire County Council ('PCC'), at a meeting on 20th February 2018 and in its subsequent pre-application advice letter dated 8th March 2018. Consequently, a Screening Opinion has not been sought and instead it has been decided to proceed to Scoping the Environmental Statement ('ES') that will accompany the planning application. The ES will also accompany the marine licence application to NRW-MLT.
- 1.5 This report sets out the proposed scope of the ES that will be prepared in accordance with the EIA Regulations.
- 1.6 The aim of this report is to provide information to the LPA to enable a Scoping Opinion to be made under Regulation 15 of the EIA Regulations. A letter to the LPA requesting such an opinion accompanies this report.

Purpose of Environmental Impact Assessment

- 1.7 EIA is the process of identifying and assessing the significant effects likely to arise from a proposed development. This requires consideration of the likely changes to the environment as a consequence of the proposed development through comparison with the existing and likely future baseline conditions in the absence of the proposed development.

Purpose of Scoping

- 1.8 The process of identifying the issues to consider within an ES (establishing the scope of the assessment) is known as scoping. Scoping is not a mandatory requirement under the EIA Regulations. However, it is recognised as a useful part of the assessment process that helps to identify the main effects that a project is likely to have on the environment.

1.9 The scoping of an EIA by which these main or significant effects are identified is, therefore, an important preliminary procedure, which sets the context for the study. Through the scoping exercise, the key environmental issues are identified at an early stage, which permits subsequent work to concentrate on those environmental topics for which significant effects may arise as a result of a proposed development.

Purpose of this Scoping Report

1.10 This report sets out details of the proposed development at Pembroke Port, the proposed EIA methodology and the proposed scope of technical assessments, and invites comments from the LPA and its consultees regarding the scope of works. The intention of this scoping exercise is to gain agreement from all key parties regarding the proposed methodology and scope of assessment.

1.11 This Scoping Report has been informed by the following:

- Correspondence from the LPA and its consultees;
- Consultee meetings;
- Desk-top studies, site visits and surveys;
- Review of relevant websites;
- National and local planning policy;
- The EIA Regulations and EIA good practice guidance; and
- Experience of other similar developments.

The Applicant

1.12 The applicant (MHPA) is the statutory harbour authority for the Port of Milford Haven. It is a Trust Port and operates on a commercial basis, charging port fees for providing conservancy and pilotage services to the vessels delivering or collecting products at the principal terminals located on the Milford Haven Waterway. It also owns and operates a property portfolio at Milford Marina and Fish Docks and the port facilities at Pembroke Dock.

Public Consultation

1.13 As part of the consultation process, the applicant will continue to actively engage with the local community in order to inform local people about the proposals, to explain the development and its likely effects and to take on board any concerns or issues. This will include the statutory pre-application public consultation requirements for 'major' development in Wales set out in Section 17 of the Planning Wales Act 2015 and the Town and Country Planning (Development Management Procedure) (Wales) (Amendment) Order 2016. The ES will include a summary of the pre-application public consultation carried out.

2 THE SITE AND THE PROPOSED DEVELOPMENT

The Site and its Surroundings

- 2.1 Pembroke Dock is in the south of Pembrokeshire on the southern side of the Milford Haven. Pembroke Port is located at the north-western edge of the settlement of Pembroke Dock (grid reference: SM958037, X [Easting]: 195835 and Y [Northing]: 203799).
- 2.2 To the north of the Port lies the Milford Haven Waterway. To the east lies Front Street and Commercial Row with a residential area and Pembroke Dock town centre beyond. To the south lies Fort Road and Meyrick Owen Way with South Pembrokeshire Hospital and commercial and residential properties beyond. To the west lies a sewage treatment work with the Milford Haven beyond.
- 2.3 Pembroke Port itself comprises a broadly rectangular area of approximately 33.25 ha (82.15 acres) ha enclosed on three sides by the Grade II listed dockyard walls. Since its construction in the 1820s the development within the dockyard has consistently evolved to meet the needs of the marine industry it serves.
- 2.4 The Port contains a mixture of larger modern industrial and older, generally smaller industrial and ancillary office buildings, several of which are listed due to their architectural or historical (associated with the former royal naval dockyard use of the site) value. The majority of the remainder of the Port is covered in hardstanding with some small areas of land covered in grass or scrub vegetation. An Existing Site Plan is included as **Figure 2**.
- 2.5 The Port can broadly be divided into three thirds, the eastern third known as 'Gate 1'. The central third known as Pembroke Dock Ferry Terminal ('PDFT') and the western third known as 'Gate 4'.

East: 'Gate 1' Area

- 2.6 The eastern Gate 1 area contains a multi-purpose quay supported by an expanse of relatively flat hardstanding and large buildings. The principal use of this area is as a cargo handling facility. Land and floorspace is used to compile and store cargo ready for onward transport by land (imports) or by sea (exports).
- 2.7 The Port serves several regular cargo trades that operate in this area as follows:
- Animal feed stuffs ('AFS') – utilising two large sheds and weighbridge facilities located in the Gate 1 area;
 - Refuse derived fuel ('RDF') – also utilising one large shed in the Gate 4 area in addition to substantial quay space in Gate 1;
 - Aggregates – utilising land close to the quay and, shortly, the expected additional installation of conveyors and concrete handling facilities;
 - Intermittent project cargos/heavy lifts – this can use land areas for long periods of time, and then require a single short period of use of the quay to load out a large fabricated component.
- 2.8 Gate 1 is attracting increasing volumes of cargo that is loaded or unloaded at Quay 1. In the main this is retained within the Gate 1 area but there are instances of cargo being moved between the Gate 1

and Gate 4 areas (e.g. the export of waste from Pembrokeshire to Sweden). An increase in aggregate import/export is also expected following GD Harries taking over the aggregate operation at Pembroke Port. The ongoing import of AFS together with frequent project cargo movements and activities associated with refinery maintenance is also expected to increase. The closure of the Murco refinery also presents opportunities at Pembroke Port for use as a staging post for export of the decommissioned refinery components to Pakistan.

- 2.9 Contact has also been made with firms regarding the use of Pembroke Port as a part of the logistics chain for tidal lagoon construction. Consequently, the capacity of Gate 1 operations in terms of land and quay space as it stands currently is likely to be exceeded in the near future.
- 2.10 Growth in regular volume cargos is expected to continue. However, congestion on the single principal berth within Gate 1 is already being experienced, with instances of one customer's ship having to wait until the berth is cleared of another customer's cargo operation.

Central: Pembroke Dock Ferry Terminal (PDFT) Area

- 2.11 PDFT is situated centrally within Pembroke Port between eastern Gate 1 and western Gate 4. It is a distinct operation, serving the long-established Irish Ferries roll on, roll off ('Ro Ro') service between Pembroke Dock and Rosslare. The operation is separated from other activities either side for border security and safety reasons.
- 2.12 The area within the terminal is used efficiently. MHPA is seeking to attract additional ferry services to the Port and this will place additional demands on the area and the single ferry berth. Opportunities for constructing a new ferry berth are limited and costly so improving the efficiency of the PDFT operation through optimising traffic circulation patterns will be a focus in the short term.

West: Gate 4 Area

- 2.13 Activities in Gate 4 are varied but centre around vessel repair, light engineering industry and the provision of service boats such as harbour tugs, line boats, range boats etc. The area is considered underutilised and its layout inefficient currently, with large areas unused and unusable due to the outmoded layout and significant constraints.
- 2.14 Mainstay Marine Solutions ('Mainstay') has a facility adjacent to, and some activity within, Gate 4 constructing, refitting and maintaining workboats, jetty and harbour infrastructure, and marine energy device fabrication. It is seeking to expand its activities in terms of boat building and marine energy given that the skill sets for both are complementary. It uses the slipways within Gate 4, which are a vital mechanism for transferring boats to and from water, for boat repair, currently. This is less than ideal as the existing slipways are designed for access and egress to the water and while work is undertaken on the slipway it is unable to service a second vessel.
- 2.15 MHPA has been involved in confidential discussions with vessel operators about a repair and maintenance facility at Pembroke Port. This would require transporting vessels ashore to an area where works can be undertaken. The advantage of this system over a dry dock is that several vessels can be worked on simultaneously inland whilst the slipway is used intensively for getting vessels and devices into and out of the water. The ship repairer is then no longer in the position of having to turn away work due to slipway unavailability as is the case currently. From a ship operations point of view, it represents a step-change in the philosophy and management of ship repair. It will be possible to book in a ship, take it out of the water and have it returned to service in much shorter time. It will also

be practical to do this for relatively minor issues that might otherwise have to wait for a routine docking. Increased slipway area would therefore add a great deal of flexibility to operations, being able to transfer small and large boats, in addition to loading or unloading renewable energy devices and components.

- 2.16 The application site itself extends to 10.72 ha, is 'L-shaped' broadly, and forms the westernmost third of the Port encompassing the majority of the Gate 4 area. It contains several larger and smaller modern buildings in addition to six listed buildings (or structures) as follows:
- Grade II* former Graving Dock including Bollards and Capstans;
 - Grade II Building Slip No 1;
 - Grade II Building Slip No 2;
 - Grade II former Timber Pond (also known as the Pickling Pond);
 - Grade II former Foremen's Office; and
 - Grade II Dockyard Walls.
- 2.17 The application site also lies within the Pembroke Dock Conservation Area.
- 2.18 The remainder of the application site is covered in hardstanding and or scrub vegetation and is underutilised currently.

Project Description

- 2.19 The intention of the proposed development is to create a flexible and efficient port-related office, industrial, warehousing and distribution and ancillary area capable of meeting the needs of the modern blue economy (meaning the sustainable use of ocean resources for economic growth, improved livelihoods and jobs and ocean ecosystem health) that will provide a significant contribution to the £1.3 Bn Swansea Bay City Deal. This will involve the intensive use of land side areas for fabrication, repair and servicing of boats, renewable energy devices, transporting cargo and other works requiring marine access, served by an appropriately structured highly flexible enlarged slipway. The Proposed Masterplan is included as **Figure 3**.
- 2.20 To realise the vision of a centre of excellence, several modifications are required to the layout of the Gate 4 area, including:
- Widening of the existing slipway and extension of the slipway towards deeper water
 - Provision of large areas of hardstanding in proximity to the quayside;
 - Areas of flat land for use either as 'laydown' or capable of being developed to create buildings in response to time-sensitive business requirements.
 - Enhanced interconnectivity between the New Gate 4 facility and the Existing Gate 1 Facility via transport corridors.
- 2.21 The proposed development will enable the provision of an enlarged single slipway at Gate 4 to facilitate the efficient transfer of vessels and marine renewable devices between land and sea, together with

the formation of large 'lay down' open areas to facilitate working on boats and devices without occupying slipways. The new single slipway will modify or replace two existing smaller slipways and will be designed such that the historic fabric of the outer walls of these two smaller slipways will be retained.

Marine Components of the Project

- 2.22 With respect to the marine elements of the proposed development, the proposed works will include:
- The creation of a single large slipway by combining the two existing westernmost slipways and extending the slipway into the Milford Haven Waterway into deeper water;
 - The infilling of the Graving Dock;
 - Capital dredging around the slipways and within the Graving Dock; and
 - The infilling of the timber/pickling pond.
- 2.23 Works to install the new slipway will include the careful dismantling of the existing structures, principally the masonry between the two exiting slipways, the intention being to retain the flank walls closest to the graving dock and Carr Jetty on the east and west slipways respectively. A clean stone base (minimum of 300 mm) will provide the base for the pre-cast concrete slipway which, it is anticipated, will extend to approximately 8 m below chart datum and cover an area of approximately 75 x 85 m. These works may necessitate some pre-construction dredging within the footprint of the new slipway and, should this be required, it is anticipated that up to 1 m depth of sediment would be dredged resulting in the removal of up to approximately 7,500 m³ of material. Excavation above tide level will be undertaken by backhoe excavator. If rock is required to be excavated to achieve the required bed level, a hydraulic breaker or milling attachment will be used on the excavator. Alternatively, a larger excavator will be used if the rock is sufficiently weak to be excavated. Below tide level, the excavator will be positioned on a barge and work from it, if necessary using a larger machine to achieve the necessary digging force.
- 2.24 The works to infill the graving dock will include the removal of the existing caisson gate and removal, via dredging, of silt and debris from within the existing graving dock. It is anticipated that sediments within the dock will be dredged to a depth of approximately 2-3 m with the removal of up to approximately 8,500 m³ of material in total. As it is preferable for this material to be removed in the dry, a temporary cofferdam may be installed across the entrance of the graving dock. The dredging method will be determined by design and contractor's methods, but is likely to be via a combination of sludge pump and excavator. Once cleared, the dock will be infilled with crushed stone over a layer of sand. A stone revetment will also be installed across the entrance to the graving dock; all deposits will be within the graving dock, with no deposits outside the boundary of it.
- 2.25 It is estimated that a total volume of approximately 16,000 m³ of spoil will be generated from works to dredge both the footprint of the new slipway and the graving dock. The possibility of beneficial use of this material will be assessed and implemented if it is practicable to do so. Otherwise, once cleared, this material will be disposed of at an authorised dredging disposal site.
- 2.26 The infilling of the timber/pickling pond will require the decommissioning/plugging of the intake and outfall pipes (e.g. by installing sheet piles against the face of the culverts) followed by the dewatering of the pickling pond and either the treatment or removal of the sediment. If the sediment is left *in situ*

then it will be covered with a geotextile prior to infilling. If the sediment is removed, then a layer of sand will initially be placed to protect the bed of the pond and side walls prior to infilling with sand and granular material. The infill material will be placed up to the existing ground level.

2.27 It is anticipated that construction works for the marine components will be over 12 months.

Onshore Components of the Project

2.28 In addition to the hardstanding and 'laydown areas' outlined above, further inland, large buildings for assembly, manufacturing and repair of vessels and devices will be required. At the southern boundary, areas and buildings for the importation and storage of goods and raw materials by land for fabrication activities on site will be required.

2.29 To achieve this, the following will be necessary:

- Creation of open space laydown in brownfield areas within the curtilage of the dockyard.
- Infilling the former Graving Dock (via the methods outlined in the marine components section above);
- Infilling the former Timber Pond (via the methods outlined in the marine components section above); and
- Demolition of some other buildings which are no longer fit for purpose, including the former Foremen's Office.

2.30 Regarding parameters, the 'worst case scenario' (i.e. largest) buildings to be erected on site are listed in the following table, along with the extent of the open areas required:

Table 1: Development Parameters

Building or Area	Use	Maximum Footprint (sq m)	Maximum Width and Breadth (m)	Maximum Height (m)
Building A	Fabrication	11,900	170 x 75	40
Building B	Repair and Fabrication	4,900	75 x 65	40
Building C	Light Assembly	2,500	129 x 20	10
Area C1	Light Assembly and Maintenance External Storage and Parking	5,000		
Area D	Open Batching Plant and Storage Area	15,584		
Area E	Employee Car Park			
Area F1	External Multi Use Laydown and Final Assembly Area	8,058		
Area F2	External Processing and Multi Use Laydown and Assembly Area	4,836		
Area J	Extended Slipway and Transition Area	13,051		

- 2.31 In addition to the above, a modified widened highway access point will be required to the Gate 4 area from Whites Farm Way.
- 2.32 The proposed development will require the acquisition of third party land within the Gate 4 area, known as 'The Triangle', which is essential to the proposed layout. If necessary, MHPA's compulsory purchase order ('CPO') powers will be used to achieve this. MHPA is continuing to pursue an amicable transfer of the land from the current owners.

Planning Context

- 2.33 Section 38(6) of the Planning and Compulsory Purchase Act 2004 states that decisions made in under the planning acts should be made in accordance with the Development Plan unless material considerations indicate otherwise.
- 2.34 A summary of relevant national legislation and planning policy context in Wales is set out within the following sections, as is a summary of the relevant local planning policy.

Well Being and Future Generations Act 2015

- 2.35 The Well-being of Future Generations (Wales) Act 2015 ('WBFGA 2015') places a duty on public bodies to place the principles of sustainability and sustainable development at the heart of its decision-making processes. The objectives of the WBFGA 2015 are set out as follows:

"A Prosperous Wales

- *Promoting resource-efficient and climate change resilient settlement patterns which minimise land take and urban sprawl, especially through the reuse of suitable previously developed land and buildings, wherever possible avoiding development on greenfield sites;*
- *Play an appropriate role to facilitate sustainable building standards;*
- *Play an appropriate role in securing the provision of infrastructure to form the physical basis for sustainable communities;*
- *Support initiative and innovation and avoid placing unnecessary burdens on enterprises so as to enhance the economic success of both urban and rural areas, helping businesses to maximise their competitiveness;*

A Resilient Wales

- *Contributing to the protection and improvement of the environment, so as to improve the quality of life, and protect local and global ecosystems;*

A Healthier Wales

- *Contribute to the protection and, where possible, the improvement of people's health and well-being as a core component of achieving the well-being goals and responding to climate change;*

A More Equal Wales

- *Promoting access to, inter alia, employment, shopping, education and community facilities and open and green space, maximising opportunities for community development and social welfare;*

- *Promote quality, lasting, environmentally-sound and flexible employment opportunities;*
- *Respect and encourage diversity in the local economy;*

A Wales of Cohesive Communities

- *Locating development so as to minimise the demand for travel, especially by private car;*
- *Fostering improvement to transport facilities and services which maintain or improve accessibility to services and facilities, secure employment, economic and environmental objectives, and improve safety and amenity;*
- *Fostering social inclusion by ensuring that full advantage is taken of the opportunities to secure a more accessible environment for everyone that the development of land and buildings provides. This includes helping to ensure that the development is accessible by means other than the private car;*

A Wales of Vibrant Culture and Thriving Welsh Language

- *Helping to ensure the conservation of the historic environment and cultural heritage;*
- *Positively contribute to the well-being of the Welsh language;*

A Globally Responsive Wales

- *Support the need to tackle the causes of climate change by moving towards a low carbon economy.”*

Swansea Bay City Deal

2.36 Pembroke Dock Marine is identified as a project within the Swansea Bay City Deal that was signed on 20th March 2017 (<http://www.swanseabaycitydeal.wales/energy/pembroke-dock-marine/>) and will:

- *“Generate a world class energy base in the region;*
- *Accelerate development in marine energy technology;*
- *Improve the capacity and capability in wave, tidal and wider offshore renewables engineering in the region;*
- *Maximise the natural assets of the region to produce environmental and economic benefits;*
- *Attract continued investment to the region;*
- *Make marine energy more reliable and cost-effective.”*

2.37 The City Deal states that the Pembroke Dock Marine project will regenerate an area of Pembroke Dock to create a dedicated site which will be used as a base by marine energy developers to progress their devices from an idea to a commercial product. The project will allow developers to test, manufacture and maintain offshore renewable energy devices and will be supported by additional developments of marine infrastructure and commercial support via the development of:

- A Marine Energy Test Area ('META') - a series of areas along the waterway where developers can test devices at an early stage of development;
- The Pembrokeshire Wave Energy Demonstration Zone (PDZ) - a large offshore wave energy site which can be used by developers to test more developed devices in open sea conditions; and
- The Marine Energy Engineering Centre of Excellence ('MEECE') - to coordinate and share knowledge, resource, experience and capacity between existing and future developers.

2.38 The META and PDZ will require separate consents via alternative consenting regimes. Pembroke Port is in the process of consolidating its position as a centre for marine renewable energy. For example, five renewable technology developers are based in Pembroke Dock and three prototypes have been constructed in the Port by the supply chain. In addition, proposals have been made for the use of the site for:

- Tidal lagoon turbine assembly; and
- Floating wind turbine foundation fabrication.

2.39 In the case of each marine renewable technology, the areas required for turbine fabrication, assembly and activity are large. The feedback received from potential customers is that Pembroke Port would need to deliver the necessary facilities within a fixed timescale. Marine renewable fabrication (including invention and manufacturing) work can use port facilities for long periods and rarely use berths. However, whilst quayside land is used for the last stages of fabrication and launching of large devices the Port would cease to be able to function efficiently as a cargo handling port due to the insufficient quayside space currently available.

Wales Spatial Plan Update 2008

2.40 The Wales Spatial Plan identifies 'Pembrokeshire - The Haven', comprising the 'Haven Towns' of Haverfordwest (including Merlins Bridge) Milford Haven, Neyland, Pembroke and Pembroke Dock, as a strategic Hub that perform an important regional role and should be a focus for future investment.

Draft Welsh National Marine Plan

2.41 Welsh Government are currently reviewing responses to the consultation on the draft Welsh National Marine Plan which ended on 29 March 2018. The draft Welsh National Marine Plan introduces a framework to support sustainable decision-making for the marine environment and includes policies specific to the ports and renewables sectors. The Pembroke Dock Marine project will consider the policies within the developing draft Welsh National Marine Plan.

Planning Policy Wales Edition 9 (November 2016)

2.42 Planning Policy Wales ('PPW') Edition 9, paragraph 7.1.1 defines economic development as development of land and buildings for activities that generate wealth, jobs and incomes. Economic land uses include the traditional employment land uses (offices, research and development, industry and warehousing), as well as uses such as retail, tourism, and public services.

2.43 Paragraph 7.1.3 states the planning system should support economic and employment growth alongside social and environmental considerations within the context of sustainable development.

- 2.44 Paragraph 7.2.2 states local planning authorities ('LPAs') are required to ensure that the economic benefits associated with a proposed development are understood and that these are given equal consideration with social and environmental issues in the decision-making process, and should recognise that there will be occasions when the economic benefits will outweigh social and environmental considerations.
- 2.45 Paragraph 7.6.1 states LPAs should adopt a positive and constructive approach to applications for economic development.

Technical Advice Note 23: Economic Development (October 2014)

- 2.46 Technical Advice Note (TAN) 23 paragraph 1.1.1 states economic development can include any form of development that generates wealth, jobs and income. It is important that the planning system recognises the economic aspects of all development and that planning decisions are made in a sustainable way which balance social, environmental and economic considerations.
- 2.47 Paragraph 1.1.5 states economic land uses also include construction.
- 2.48 Paragraph 1.2.1 states the economic benefits associated with development may be geographically spread out far beyond the area where the development is located. Consequently, it is essential that the planning system recognises, and gives due weight to, the economic benefits associated with new development.
- 2.49 Paragraph 1.2.2 advises that planning for economic land uses should aim to provide the land that the market requires, unless there are good reasons to the contrary. Where markets work well, this will help maximise economic efficiency and growth.
- 2.50 Paragraph 1.2.5 states LPAs should recognise market signals and have regard to the need to guide economic development to the most appropriate locations, rather than prevent or discourage such development.
- 2.51 Paragraph 2.1.2 states economic development would cause environmental or social harm which cannot be fully mitigated, careful consideration of the economic benefits will be necessary.
- 2.52 Paragraph 2.1.5 states that where an LPA is considering a planning application that could cause harm to the environment or social cohesion the following three questions should be asked to help clarify and balance the economic, social and environmental issues:
1. **Alternatives:** if the land is not made available (the site is not allocated, or the application is refused), is it likely that the demand could be met on a site where development would cause less harm, and if so where?
 2. **Jobs accommodated:** how many direct jobs will be based at the site?
 3. **Special merit:** would the development make any special contribution to policy objectives?
- 2.53 Paragraph 2.1.13 advises that the planning system should support, in particular, the low-carbon economy, innovative business or technology clusters and social enterprises which are defined as businesses that are particularly important in providing opportunities for social groups disadvantaged in the labour market. Developments that will provide space for these categories of businesses count as making special policy contributions.

Technical Advice Note 24: The Historic Environment (May 2017)

- 2.54 TAN 24 sets out conservation principles to assess the potential impacts of a development proposal on the significance of any historic asset(s) and to assist in the decision making where the historic environment is affected. The six principles are as follows:
1. Historic assets will be managed to sustain their values;
 2. Understanding the significance of historic assets is vital;
 3. The historic environment is a shared resource;
 4. Everyone will be able to participate in sustaining the historic environment;
 5. Decisions about change must be reasonable, transparent and consistent;
 6. Documenting and learning from decisions is essential.
- 2.55 Paragraph 1.12 encourages the use of these principles when considering development proposals and other works to historic assets. There are four heritage values which need to be understood before the significance of the asset can be assessed.
1. Evidential value;
 2. Historical value;
 3. Aesthetic value;
 4. Communal value.
- 2.56 An understanding of these values forms the basis of a statement of significance prepared as part of a heritage impact statement.

Pembrokeshire Local Development Plan (February 2013)

- 2.57 The Pembrokeshire Local Development Plan ('LDP'), adopted February 2013, Proposals Map identifies the site as within the settlement boundary of Pembroke Dock (Policy SP 13) and within a Conservation Area (Policy GN.38). The site, including the foreshore, is also within an area designated for Port and Energy Related Development (Policy SP 2), Hard Rock Resource (Policy GN.22) and includes a designated Existing Mineral and Quarry Site (Policy GN.23) within the north-eastern perimeter. In addition, two Scheduled Ancient Monuments ('SAMs') are indicated at the southern and south-western perimeter of the site (Policy GN.38) together with an area of Amenity Open Space (Policy GN.35) to the south east along Meyrick Owen Way. The Milford Haven near the site, at approximately 250 m to the north of the quayside, is designated as a Special Area of Conservation ('SAC') (Policy GN.37).
- 2.58 Policy SP1 'Sustainable Development' states all development proposals must demonstrate how positive economic, social and environmental impacts will be achieved and adverse impacts minimised.
- 2.59 Policy SP 2 'Port and Energy Related Development' states development at the Port of Milford Haven, which includes the dock area at Pembroke Dock, will be permitted for port related facilities and infrastructure, including energy related development.

2.60 Policy SP 13 'Settlement Boundaries' states Settlement Boundaries define the areas within which development opportunities may be appropriate.

2.61 Policy GN.1 'General Development Policy' states development will be permitted where the following criteria are met:

1. The nature, location, siting and scale of the proposed development is compatible with the capacity and character of the site and the area within which it is located;
2. It would not result in a significant detrimental impact on local amenity in terms of visual impact, loss of light or privacy, odours, smoke, fumes, dust, air quality or an increase in noise or vibration levels;
3. It would not adversely affect landscape character, quality or diversity, including the special qualities of the Pembrokeshire Coast National Park and neighbouring authorities;
4. It respects and protects the natural environment including protected habitats and species;
5. It would take place in an accessible location, would incorporate sustainable transport and accessibility principles and would not result in a detrimental impact on highway safety or in traffic exceeding the capacity of the highway network;
6. Necessary and appropriate service infrastructure, access and parking can be provided;
7. It would not cause or result in unacceptable harm to health and safety;
8. It would not have a significant adverse impact on water quality; and
9. It would neither contribute to the coalescence of distinct settlements nor create or consolidate ribbon development.

2.62 Policy GN.2 'Sustainable Design' states development will be permitted where relevant criteria are met:

1. It is of a good design which pays due regard to local distinctiveness and contributes positively to the local context;
2. It is appropriate to the local character and landscape/townscape context in terms of layout, scale, form, siting, massing, height, density, mix, detailing, use of materials, landscaping and access arrangements / layout;
3. It incorporates a resource efficient and climate responsive design through location, orientation, density, layout, land use, materials, water conservation and the use of sustainable drainage systems and waste management solutions;
4. It achieves a flexible and adaptable design;
5. It creates an inclusive and accessible environment for users that addresses community safety;
6. It provides a good quality, vibrant public realm that integrates well with adjoining streets and spaces and
7. It contributes to delivering well designed outdoor space with good linkages to adjoining streets, spaces and other green infrastructure.

- 2.63 GN.6 'Employment Proposals' states Class B1, B2 and B8 uses on unallocated land will be permitted on sites within Settlement Boundaries.
- 2.64 GN.9 'Extensions to Employment Sites' states proposals to diversify or intensify employment uses and/or extend them onto adjacent land will be permitted where the scale and nature of the original development together with the extension is compatible with its location.
- 2.65 GN.22 'Prior Extraction of the Mineral Resource' states that where new development is permitted in an area of mineral resource, prior extraction of any economic reserves of the mineral must be achieved, wherever appropriate in terms of economic feasibility and environmental and other planning considerations, prior to the commencement of the development.
- 2.66 Policy GN.23 'Minerals Working' states proposals for mineral working and extensions to existing sites will be permitted where the following criteria are met:
1. In the case of non-energy minerals, the mineral is required to supply an identified need which cannot be supplied from secondary or recycled materials or existing reserves;
 2. In the case of non-energy minerals, the scale of the development is appropriate to serve the local market and a suitable proportion of the regional market;
 3. In the case of former minerals sites, there is no adverse effect on land which has been satisfactorily restored and the proposal makes a valuable contribution to the character of the local landscape and local environment; and
 4. There is provision for landscaping, groundwater protection, a beneficial afteruse, restoration and postclosure management of the site, including the progressive restoration of sites where appropriate.
- 2.67 Policy GN.35 'Protection of Open Spaces with Amenity Value' states development that would adversely affect the appearance, character or local amenity value of areas of public and private open space will not normally be permitted. In exceptional circumstances, where the proposal will bring clear social and/or economic benefits to the local community and make a positive contribution to the built environment, development may be permitted where it can be demonstrated that no suitable alternative site is available.
- 2.68 GN.37 'Protection and Enhancement of Biodiversity' states all development should demonstrate a positive approach to maintaining and, wherever possible, enhancing biodiversity. Development that would disturb or otherwise harm protected species or their habitats, or the integrity of other habitats, sites or features of importance to wildlife and individual species, will only be permitted in exceptional circumstances where the effects are minimised or mitigated through careful design, work scheduling or other appropriate measures.
- 2.69 Policy GN.38 'Protection and Enhancement of the Historic Environment' states development that affects sites and landscapes of architectural and/or historical merit or archaeological importance, or their setting, will only be permitted where it can be demonstrated that it would protect or enhance their character and integrity.

Registered Historic Landscapes

- 2.70 The site is situated within the non-statutory Milford Haven Waterway Landscape of Outstanding Historic Interest in Wales.

3 GENERAL APPROACH TO EIA

Requirement for Environmental Impact Assessment

- 3.1 The legislative framework for EIA is set by European Directive 2011/92/EU, as amended by Directive 2014/52/EU (collectively referred to as the EIA Directive). Directive 2014/52/EU requires Member States to transpose its requirements into national law by 16 May 2017 and set out arrangements for a transitional period from the regime laid down by Directive 2011/92/EU.
- 3.2 The EIA Directive requires an EIA to be completed in support of an application for development consent for certain types of project. For projects of this type in Wales, the European legislative requirements are transposed into law by the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017.
- 3.3 The process of identifying whether or not EIA is required for a development is known as screening. Projects of the type listed in Schedule 1 of the Regulations require EIA in all cases. Projects of the type listed in Schedule 2 may require EIA in certain circumstances.
- 3.4 The proposed development would fall within the categories 4(g) Shipyards, 10(a) Industrial estate development projects, 10(b) Urban development projects, 10(g) Construction of harbours and port installations including fishing harbours and 11(f) Other projects: test benches for engines, turbines or reactors of Schedule 2. The proposed development would exceed the relevant thresholds for each of these types of development within Schedule 2.
- 3.5 Schedule 2 development requires screening against the criteria set out in Schedule 3 of the Regulations. The criteria include the characteristics of the development, location of development and characteristics of the potential impact. Having regard to the criteria within Schedule 3, including the characteristics of the development with regard to its size and design and the environmental sensitivity of the geographical area likely to be affected by the proposed development and its potential impact, it is considered that the proposed development is EIA development.

Marine Consenting

- 3.6 Under the Marine and Coastal Access Act ('MCAA') 2009, a Marine Licence is required to construct, alter or improve any works and for activities that involve the deposit or removal of a substance or object within the UK marine licensing area. Within Welsh territorial waters, marine licences are issued by the NRW-MLT. Under the Marine Works (Environmental Impact Assessment) Regulations 2007 as amended by the Marine Works (Environmental Impact Assessment) (Amendment) Regulations 2011, EIA is required for certain projects (i.e. Annex 1 or Annex 2 developments under the European Commission (EC) Directive 2011/92/EU, as amended by Directive 2014/52/EU).
- 3.7 As outlined above, an EIA will be undertaken to support the outline planning application. The ES, including consideration of all terrestrial and marine components of the project, will therefore also accompany the Marine Licence application to NRW-MLT.
- 3.8 The Marine Licence application will also consider the Habitats and Birds Directives (Council Directives 92/43/EEC and 2009/147/EC), respectively; further discussed under Habitats Regulations Assessment below, the Water Framework Directive ('WFD'); further discussed under Water

Framework Directive Assessment below, and will ensure compliance with the Marine Strategy Framework Directive, taking account of the relevant policies of the draft Welsh National Marine Plan.

Habitats Regulation Assessment (HRA)

- 3.9** The Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017 require the assessment of any significant effects on qualifying features of internationally important nature conservation sites that are likely to arise as a result of a proposed project. Internationally important sites include Special Areas of Conservation (SACs), or candidate SACs (cSACs), Special Protection Areas (SPAs) or potential SPAs (pSPAs), Sites of Community Importance (SCI) and Ramsar sites. These are often referred to as Natura 2000 sites. This assessment is to be undertaken by the 'competent authority', which in the case of the Pembroke Dock Marine development may be either Natural Resources Wales ('NRW') or PCC due to the overlap in jurisdictions. Discussion with both parties will take place to agree roles and responsibilities, including who will fulfil the role of competent authority, and processes for coordination and ensuring appropriate input from both parties during development of the HRA.
- 3.10** To carry out the HRA, the competent authority requires that a report is submitted alongside any planning and marine licence applications under section 63(1-2) of the Conservation of Habitats and Species Regulations 2017. While the report to inform HRA does not form part of the ES, the baseline information presented within the ES contains some of the same information.

Water Framework Directive (WFD) Assessment

- 3.11** Consideration of the WFD (Council Directive 2000/60/EC) is required to support marine licence applications to NRW-MLT. The WFD aims to protect and enhance water bodies within Europe and covers all estuarine and coastal waters out to 1 nautical mile (Nm). Under the WFD, coastal waters, estuaries, rivers, man-made docks and canals are divided into a series of water bodies. Within each water body, the WFD sets ecological and chemical objectives. The aim of the WFD was for all water bodies to achieve "good status" by 2015, although since this was not achieved in the UK, these targets have since been revised by the relevant UK bodies, including NRW. Under all conditions, it requires that there should be no deterioration in status.
- 3.12** A WFD assessment is therefore required, where a project has the potential to impact on water bodies or protected areas under the WFD and has the potential to cause deterioration in the ecological and chemical status of a water body or to compromise improvements which might otherwise lead to a water body meeting its WFD objectives. The Pembroke Dock Marine project is within the boundary of the Milford Haven Inner transitional waterbody.
- 3.13** Currently, the most appropriate guidelines for undertaking WFD assessments in Welsh waters are the Environment Agency's *Clearing the Waters for All* guidance (Environment Agency, 2016). The WFD assessment will draw on the information presented within the ES, considering the effects of the marine elements of the project on receptors including hydromorphology, biology (habitats and fish), water quality, protected areas and invasive and non-native species (INNS; Environment Agency, 2016). Should further guidance be published by NRW during the project programme, this will be used to support the WFD assessment submitted with the Marine Licence application.

Information Required

3.14 Although there is no statutory provision as to the form of an ES, it must contain the information specified in Regulation 18(3), including any relevant information specified in Schedule 4 of the EIA Regulations, as set out below:

1. A description of the development including in particular:
 - a) A description of the location of the development;
 - b) A description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;
 - c) A description of the main characteristics and the operational phase of the development (, production process), for instance, energy demand and energy used, nature and quantity of the minerals and natural resources (including water, land, soil and biodiversity) used;
 - d) An estimate, by type and quantity, of expected residues and emissions (such as water, air, soils and sub soil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during the construction and operation phases.
2. A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects;
3. A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort based on the availability of environmental information and scientific knowledge.
4. A description of the factors specified in regulation 4(2) likely to be significantly affected by the development; population, human health, biodiversity (for example fauna and flora), land, (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaption), material assets, cultural heritage, including archaeological aspects, and landscape.
5. A description of the likely significant effects of the development on the environment resulting from, inter alia:
 - a) The construction and existence of the development, including, where relevant, demolition works;
 - b) The use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;
 - c) The emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;

- d) The risks to human health, cultural heritage or the environment (for example due to accidents or disasters);
- e) The cumulation of effects with other existing and/or approved projects, considering any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;
- f) The impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;
- g) The technologies and the substances used.

The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC(a) and Directive 2009/147/EC(b).

- 6. A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.
- 7. A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example, the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.
- 8. A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to EU legislation such as Directive 2012/18/EU(c) of the European Parliament and of the Council or Council Directive 2009/71/Euratom(d) or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.
- 9. A non-technical summary of the information provided under 1 to 8 above.
- 10. A reference list detailing the sources used for the descriptions and assessments included in the ES.

3.15 The information supplied in the ES will provide a clear understanding of the likely significant effects of the project upon the environment. The following sections outline the overall approach to EIA in order to meet these requirements.

Structure of the Environmental Statement

3.16 The ES will be structured logically, enabling all relevant environmental information to be found quickly and easily. The ES will describe the EIA process and its findings, and will include the following sections:

- Non-Technical Summary (as a standalone document);
- Written Statement;
- Figures; and
- Appendices.

Environmental Impact Assessment Methodology

Relevant EIA Guidance

3.17 The EIA process will take into account relevant government or institute guidance as appropriate, including:

- Welsh Office Circular 11/99: Environmental Impact Assessment;
- Department for Communities and Local Government (2014) Planning Practice Guidance at <http://planningguidance.planningportal.gov.uk>;
- Department of the Environment, Transport and the Regions (DETR) (1997) Mitigation Measures in Environmental Statements. HMSO;
- Highways Agency *et al.* (2008) Design Manual for Roads and Bridges, Volume 11, Section 2, Part 5. HA 205/08;
- Institute of Environmental Management and Assessment (2004) Guidelines for Environmental Impact Assessment;
- Institute of Environmental Management and Assessment (2011) The State of Environmental Impact Assessment Practice in the UK. Special Report;
- Institute of Environmental Management and Assessment (2015a) Environmental Impact Assessment: Guide to Shaping Quality Development;
- Institute of Environmental Management and Assessment (2015b) Climate Change Resilience and Adaptation;
- Institute of Environmental Management and Assessment (2016) Environmental Impact Assessment: Guide to Delivering Quality Development;
- Institute of Environmental Management and Assessment (2017) Environmental Impact Assessment: Assessing Greenhouse Gas Emissions and Evaluating their Significance; and
- Institute of Environmental Management and Assessment (2017) Health in Environmental Impact Assessment: A Primer for a Proportional Approach.

3.18 Other topic-specific specialist methodologies and good practice guidelines will be drawn on as necessary.

Key Elements of the General Approach

3.19 The assessment of each environmental topic will form a separate chapter of the ES. For each environmental topic, the following will be addressed:

- Methodology and assessment criteria;
- Description of the environmental baseline (existing conditions);
- Identification of likely effects;
- Evaluation and assessment of the significance of identified effects, taking into account any measures designed to reduce or avoid environmental effects which form part of the project and to which the developer is committed; and
- Identification of any further mitigation measures envisaged to avoid, reduce and, if possible, remedy adverse effects (in addition to those measures that form part of the project).

Methodology and Assessment Criteria

3.20 Each topic chapter will provide details of the methodology for baseline data collection and the approach to the assessment of effects. Details of the proposed approach for each topic are provided in Chapter 5 of this Scoping Report. Each identified environmental topic will be considered by a specialist in that area. The identification and evaluation of effects will take into account relevant topic-specific guidance where available.

Description of the Environmental Baseline

3.21 The existing and likely future environmental conditions in the absence of the project are known as 'baseline conditions'. Each topic based chapter will include a description of the current (baseline) environmental conditions. The baseline conditions at the site and within the study area form the basis of the assessment, enabling the likely significant effects to be identified through a comparison with the baseline conditions.

3.22 The baseline for the assessment of environmental effects will primarily be drawn from existing conditions during the main period of the EIA work. Consideration will also be given to any likely changes between the time of survey and the future baseline for the construction and operation of the project. In some cases, these changes may include the construction or operation of other planned developments in the area. Where such developments are built and operational at the time of writing and data collection, these will be considered to form part of the baseline environment. Where sufficient and robust information is available, such as expected traffic growth figures, other future developments will be considered as part of the future baseline conditions. In all other cases, planned future developments will be considered within the assessment of cumulative effects.

3.23 The consideration of future baseline conditions will also take into account the likely effects of climate change, as far as these are known at the time of writing. This will be based on information available from the UK Climate Projections project (UKCP09), which provides information on plausible changes

in climate for the UK (Environment Agency and Met Office, 2016) and on published documents such as the UK Climate Change Risk Assessment 2017 (Committee on Climate Change, 2016).

Assessment of Effects

- 3.24 The EIA Regulations require the identification of the likely significant environmental effects of the project. Each topic chapter will take into account both the sensitivity of receptors affected and the magnitude of the likely impact in determining the significance of the effect.

Sensitivity or Importance of Receptors

- 3.25 Receptors are defined as the physical resource or user group that would be affected by a proposed development. The baseline studies will identify potential environmental receptors for each topic and will evaluate their sensitivity to the proposed development. The sensitivity or importance of a receptor may depend, for example, on its frequency or extent of occurrence at an international, national, regional or local level.

Magnitude of Impact

- 3.26 Impacts are defined as the physical changes to the environment attributable to the project. For each topic, the likely environmental impacts will be identified. The magnitude of the impact will be described using defined criteria within each topic chapter.

- 3.27 The categorisation of the impact magnitude may take into account the following four factors:

- Extent;
- Duration;
- Frequency; and
- Reversibility.

- 3.28 Impacts will be defined as either adverse or beneficial. Depending on discipline, they may also be described as:

- Direct: Arise from activities associated with the project. These tend to be either spatially or temporally concurrent;
- Indirect: Impacts on the environment which are not a direct result of the project, often produced away from the project site or as a result of a complex pathway.

- 3.29 Impacts will be divided into those occurring during the construction phase and those occurring during operation. Where appropriate, some chapters may refer to these as temporary and permanent impacts.

Significance of Effects

- 3.30 Effect is the term used to express the consequence of an impact (expressed as the 'significance of effect'), which is determined by correlating the magnitude of the impact to the sensitivity of the receptor or resource.

- 3.31 The magnitude of an impact does not directly translate into significance of effect. For example, a significant effect may arise as a result of a relatively modest impact on a resource of national value, or a large impact on a resource of local value. In broad terms, therefore, the significance of the effect can depend on both the impact magnitude and the sensitivity or importance of the receptor.
- 3.32 Levels of significance that will be used in the assessment include, in descending order:
- Major;
 - Moderate;
 - Minor;
 - Neutral.
- 3.33 Where an effect is described as 'neutral' this means that there is either no effect or that the significance of any effect is considered to be negligible. All other levels of significance will apply to both adverse and beneficial effects. These significance levels will be defined separately for each topic within the methodology sections. In all cases, the judgement made as to significance will be that of the author of the relevant chapter with reference to appropriate standards/guidelines where relevant.

Cumulative Effects

- 3.34 The cumulative effects of the proposed development in conjunction with other proposed schemes will be considered. The cumulative effects assessment will consider any developments that are formally in the planning system at the time of submission. Developments that are built and operational at the time of assessment will be considered as part of the baseline.
- 3.35 As the planning permission for the Martello Quays development located to the east of Pembroke Port has lapsed, there are no developments that are formally in the planning system that we are aware of currently that would need to be considered cumulatively.
- 3.36 A list of any proposed developments and planning policy allocations to be included within the cumulative assessment, if any, is requested from PCC where it considers that they might have an effect in combination with the proposed development.

Mitigation Measures

- 3.37 The EIA Regulations require that where significant effects are identified '*a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce or, if possible, offset likely significant adverse effects on the environment*' should be included in the ES.
- 3.38 The development of mitigation measures is part of an iterative EIA process. Therefore, measures will be developed throughout the EIA process in response to the findings of initial assessments. The project will include a range of measures designed to reduce or prevent significant adverse environmental effects arising, where practicable. In some cases, these measures may result in enhancement of environmental conditions. The assessment of effects will therefore consider all measures that form part of the project and to which MHPA is committed.
- 3.39 The topic chapters will therefore consider all measures that form part of the proposed development, including:

- Measures included as part of the project design (sometimes referred to as primary mitigation);
- Measures to be adopted during construction to avoid and minimise environmental effects, such as pollution control measures. These measures would be implemented through the Code of Construction Practice (CoCP); and
- Measures required as a result of legislative requirements.

3.40 Where required, further mitigation measures will be identified within topic chapters. These are measures that could further prevent, reduce and, where possible, offset any residual adverse effects on the environment.

3.41 In some cases, monitoring measures may be appropriate, for example, to ensure that proposed planting becomes established. Where appropriate, monitoring measures will be set out.

Summary Tables

3.42 Summary tables will be used to summarise the effects of the project for each environmental topic.

4 SCOPE OF ASSESSMENT

Work Undertaken to Date

4.1 The following studies have been undertaken or are currently ongoing in relation to the proposed development.

- Preliminary Ecology Appraisal (RSK May 2017);
- Botanical Report with regard to Open Mosaic Habitat (RSK January 2018);
- Reptile Survey Report (RSK November 2017);
- Interim Nocturnal Bat Survey Report (RSK November 2017);
- Preliminary Bat Roost Assessment (RSK July 2017);
- Badger Sett Monitoring Report (RSK November 2017);
- Tree Survey and Arboricultural Impact Assessment (Mackley Davies January 2018);
- Heritage Assessment (Turley Heritage, 2016);
- Port of Pembroke – Culvert Traverse Survey Letter Report (Sewer Services Ltd on behalf of W S Atkins 1999);
- Land Quality Assessment Phase 1: Desk Study, HM Mooring Depot Pembroke Dock (Enviros Consulting Ltd on behalf of Defence Estates 2006);
- Land Quality Assessment Phase Two: Intrusive Investigation, HM Mooring Depot Pembroke Dock (Enviros Consulting Ltd on behalf of Defence Estates 2007);
- Ex-RMAS Site, 2020 Condition Survey Report (Atkins 2008);
- Gate 4 Pickling Pond Culvert System, Preliminary Inspection Report (Atkins 2013);
- Site within Gate 1 Pembroke Dock Pembrokeshire, Preliminary Risk Assessment (RSK Environment Ltd 2015);
- Phase I Ground Investigation Interpretative Report, Pembroke Dock Port (Quantum Geotechnical 2015);
- Pembroke Dock Geotechnical Desk Study (Royal Haskoning DHV 2015);
- UXO Desk Study and Risk Assessment, Pembroke Dockyard (Zetica Ltd on behalf of Royal Haskoning DHV 2015);
- Milford and Pembroke Docks, Ground Investigation Factual Report (Quantum Geotechnical Ltd 2016); and
- Pembroke Dock Redevelopments, Ground Investigation Report (Royal Haskoning DHV 2016);

- Utility Services at RMAS Gate 4 Pembroke Dock (SABA Consulting Ltd 2009).

Topics Scoped Out of Assessment

4.2 Considering the findings of the above studies, together with knowledge of the site and surrounding area, it is proposed that the following topics are not included in the scope of the ES:

- Climate change;
- Population and human health;
- Material assets.

Climate Change

4.3 An assessment of climate change and greenhouse gas emissions (GHGs) is required under the 2017 EIA Regulations where there is potential for likely significant effects. At present there is no single piece of methodological guidance accepted as standard, although IEMA's guidance on GHG emissions states that, in principle, any GHG emissions may be considered to be significant, and advocates as good practice that GHG emissions should always be reported at an appropriate, proportionate level of detail in an ES.

4.4 The proposed development will facilitate the development and advancement of marine renewable energy technologies and devices that would reduce reliance on fossil fuels, in turn reducing the emission of GHGs in response to the threat of climate change.

4.5 A sub-section on climate change will be included within the flooding and hydrology ES chapter, which would be relevant and proportionate to the development proposed. Therefore, no separate consideration of climate change is considered necessary.

Population and Human Health

4.6 An assessment of population and human health is required within the 2017 EIA Regulations where there is potential for likely significant effects. No guidance for assessment of health in EIA is available currently (expected later in 2018).

4.7 Population and human health has a broad scope and is in practice considered across a range of other topic areas within the ES, in particular socio-economic, noise and vibration, air quality, ground conditions and landscape and visual. These topics are proposed to be included within the ES. Therefore, no separate consideration of population and human health is considered necessary.

Material Assets

4.8 The EIA Regulations refer to 'material assets', including architectural and archaeological heritage. The phrase 'material assets' has a broad scope, which may include assets of human or natural origin, valued for socio-economic or heritage reasons. Material assets are in practice considered across a range of topic areas within an ES, in particular the socio-economic and historic environment chapters. These topics are proposed to be included within the ES. Therefore, no separate consideration of material assets is considered necessary.

Content of the Environmental Statement

4.9 **Table 2** below identifies the chapters that are proposed for inclusion in the ES. Further details of the approach to the assessment and its scope are provided in Chapter 5 of this Scoping Report.

Table 2: Structure of Environmental Statement

	Structure of Environmental Statement
Non-Technical Summary	Summary of the ES using non-technical terminology
Written Statement	
Chapter 1	Introduction
Chapter 2	Project Description
Chapter 3	Need and Alternatives Considered
Chapter 4	Environmental Assessment Methodology
Chapter 5	Planning Policy Context
Chapter 6	Marine Environment – Marine Ecology
Chapter 7	Marine Environment – Coastal Processes
Chapter 8	Noise and Vibration
Chapter 9	Air Quality
Chapter 10	Historic Environment
Chapter 11	Transportation
Chapter 12	Socio-Economics
Chapter 13	Ground Conditions
Chapter 14	Landscape and Visual Impact
Chapter 15	Flooding and Hydrology
Chapter 16	Biodiversity
Figures	Relevant figures for each chapter
Appendices	Relevant technical appendices for each chapter

5 TECHNICAL ASSESSMENTS

Chapter 1: Introduction

- 5.1 This chapter will provide the introduction to the ES, including details of the application, need for EIA and the structure of the ES.

Chapter 2: Project Description

- 5.2 The EIA will include a description of the project, which will form the basis of the assessment of effects. The EIA Regulations require an ES to include:

'A description of the development comprising information on the site, design and size and other relevant features of the development.'

- 5.3 This project description chapter will include details of the site, together with a description of the key components of the proposed development. The description will include the following information, as far as practicable at the time of writing:

- Construction phase – a description of the key works, activities and processes that would be required during the construction phase; and
- Operational phase – a description of the completed development and its use.

- 5.4 Where options remain at the time of the assessment (regarding construction techniques, for example), the ES will provide clear explanation of the assumptions made. Where appropriate, the realistic 'worst case' scenario will be assessed.

- 5.5 Where mitigation measures have been identified and developed through the EIA process and have been incorporated as part of the project, details of these measures will be set out within the project description chapter.

Chapter 3: Need and Alternatives Considered

- 5.6 This chapter will briefly set out the need for the proposed development. In addition, the EIA Regulations require the alternatives considered by the applicant to be set out in the ES:

'A description of the reasonable alternatives studied by the developer, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment.'

- 5.7 This chapter will summarise the reasons for the selection of the site and provide an outline of the alternatives considered during the EIA process, including a description of the alternative design and layout options that have been considered.

Chapter 4: Environmental Assessment Methodology

- 5.8 Details of the overall approach to EIA will be set out in this chapter, together with details of the scoping process, consultation undertaken and the overall approach to the assessment of significance. Topic specific methodologies, such as survey methods, will be provided in each topic chapter.

Chapter 5: Planning Policy Context

- 5.9 Whilst the draft guidance on EIA from the Department for Communities and Local Government 'EIA: A Guide to Good Practice and Procedures' (DCLG 2006) (paragraph 155) states that there is no requirement to provide chapters on planning in ESs, a planning policy chapter is proposed to avoid repetition throughout the ES.
- 5.10 This chapter of the ES will provide an overview of relevant legislative and planning policy context having regard to national and local policy documents, as appropriate. Any additional topic specific legislation or policy required to be referred to as part of the technical assessments will be set out within the relevant topic chapter.
- 5.11 In addition, a separate Planning Statement will be submitted with the planning application that will provide further analysis of the proposed development against the planning policy context.

Chapter 6: Marine Environment – Marine Ecology

- 5.12 This chapter will provide an assessment of marine ecology effects of the proposed development during the construction and operational phases. The assessment will be undertaken by RPS Consulting Services Ltd.

Baseline Information

Designated Sites

- 5.13 Several internationally and nationally designated areas occur in the vicinity of the proposed development. These sites are shown in **Figure 4**. and a summary of their qualifying features is presented in **Table 3**. Several of the features presented in **Table 3** have been scoped out for the purposes of the assessment of effects associated with marine works, due to the lack of receptor pathway between these features and the proposed development:
- Pembrokeshire Marine SAC features to be scoped out: Effects on habitat features located a considerable distance from the development have been scoped out, i.e. Large shallow inlets and bays, submerged or partially submerged sea caves, sandbanks which are slightly covered by sea water at all time (all located outside Milford Haven). In addition, the Annex I habitats coastal lagoons and Atlantic salt meadows and the Annex II species shore dock, have not been recorded and are unlikely to be recorded in the immediate vicinity of Pembroke Dock and have therefore been scoped out;
 - Cleddau Rivers SAC features to be scoped out: There is no receptor-impact pathway for effects on habitats and species which are entirely freshwater (see Table 3) and therefore effects on these features have been scoped out. Migratory fish species (e.g. lamprey and shad species) which may migrate through Milford Haven will be considered in the impact assessment. See the proposed Biodiversity Chapter for an assessment of effects on otter populations; and
 - Effects on terrestrial ecology receptors (i.e. otter and birds, including wading birds) which are features of European designated sites are considered in the Biodiversity Chapter.
- 5.14 The key sites of relevance to the assessment will be the Pembrokeshire Marine SAC and the Milford Haven Waterway Site of Special Scientific Interest (SSSI) due to the proximity of these sites to

Pembroke Dock (i.e. <50 m). The West Wales Marine cSAC and Cleddau Rivers SAC will be considered due to the mobile nature of the qualifying features (i.e. harbour porpoise and fish species, respectively), which are discussed further below.

Table 3: Marine Nature Conservation Designations and Qualifying Features in the Vicinity of Pembroke Dock to be Considered in the EIA

Designated site	Distance Red Line Boundary	Qualifying Features (those features shaded in grey will not be considered in the ES due to a lack of receptor-impact pathway)
Pembrokeshire Marine/ Sir Benfro Forol SAC	<50 m	<p>Annex I habitats</p> <ul style="list-style-type: none"> • Estuaries • Large shallow inlets and bays • Reefs • Sandbanks which are slightly covered by sea water all the time • Mudflats and sandflats not covered by seawater at low tide • Coastal lagoons • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) • Submerged or partially submerged sea caves. <p>Annex II species</p> <ul style="list-style-type: none"> • Grey seal <i>Halichoerus grypus</i> • Shore dock <i>Rumex rupestris</i> • Sea lamprey <i>Petromyzon marinus</i> • River lamprey <i>Lampetra fluviatilis</i> • Allis shad <i>Alosa alosa</i> • Twaite shad <i>Alosa fallax</i> • Otter <i>Lutra lutra</i> (see proposed Biodiversity Chapter)
West Wales Marine / Gorllewin Cymru Forol SAC	10.8 km	<p>Annex II species</p> <ul style="list-style-type: none"> • Harbour porpoise <i>Phocoena phocoena</i>
Afonydd Cleddau/ Cleddau Rivers SAC		<p>Annex I habitats</p> <ul style="list-style-type: none"> • Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation • Active raised bogs • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) <p>Annex II species</p> <ul style="list-style-type: none"> • Otter <i>Lutra lutra</i> (see proposed Biodiversity Chapter) • Bullhead <i>Cottus gobio</i> • River lamprey <i>Lampetra fluviatilis</i> • Brook lamprey <i>Lampetra planeri</i> • Sea lamprey <i>Petromyzon marinus</i>

Designated site	Distance Red Line Boundary	Qualifying Features (those features shaded in grey will not be considered in the ES due to a lack of receptor-impact pathway)
Milford Haven Waterway SSSI	<50 m	<p>Milford Haven Waterway is of special interest for its non-marine Devonian geology, ancient woodland, saltmarsh, saline lagoons, rare and scarce plants and invertebrates.</p> <p>The marine ecological features of interest include intertidal rocky shores, sandy beaches, mudflats and muddy creeks. Intertidal sediments and substrates (including muddy gravels, sheltered mud, moderately exposed sand and sheltered rock) provide habitat for a diverse range of intertidal communities, including species rich rockpools, eelgrass <i>Zostera</i> spp. beds, overhang and under-boulder communities. Tidal movements are strong in some areas, allow for development of tide swept lower shore communities which are particularly rich.</p> <p>The SSSI also supports nationally important numbers of migratory waterfowl, greater and lesser horseshoe bats <i>Rhinolophus ferrumequinum</i> and <i>R. hipposideros</i>, and otter (see proposed Biodiversity Chapter).</p>

Marine Ecology Background Information

- 5.15** Milford Haven is characterised by a diverse range of habitats. In the west, close to the mouth of the Haven, intertidal rocky substrates and sandy sediments characterise the area, while in the east, close to Pembroke Dock, intertidal and subtidal areas are dominated by sediments. These sediments largely comprise muddy sediments in both intertidal and subtidal areas, although with varying proportions of gravel, e.g. with mixed muddy gravel in intertidal areas on the north shore opposite Pembroke Dock and to the west of Pembroke Dock and Carr Jetty.
- 5.16** The diverse range of habitats and substrate types in Milford Haven provide habitat for a range of seaweed, marine invertebrate, fish and marine mammal species. Fish communities within the Haven are characterised by a mixture of demersal fish, including flatfish (e.g. plaice and sole), gadoids (cod, whiting, pollack), and pelagic species, including sprat, herring and mackerel. Milford Haven is used as a nursery habitat for several fish species (including bass, rays, sole and whiting) with historic records of herring spawning also within the Haven. The area is also known to be used as a migratory route for diadromous fish species which migrate to/from spawning habitats in freshwater habitats upstream (i.e. the Cleddau rivers; see **Table 3**).
- 5.17** Marine mammals have also been recorded within Milford Haven, with the main grey seal colony in Wales located along the islands and coves of Pembrokeshire, outside Milford Haven. While the pupping locations occur outside Milford Haven, this species is known to travel widely and therefore may occur within the vicinity of Pembroke Dock. The other marine mammal species with the potential to occur within the vicinity of Pembroke Dock is harbour porpoise, with the West Wales Marine Candidate SAC (cSAC) extending across most of west Wales, including the Llyn Peninsula, Cardigan Bay, Pembrokeshire and into Milford Haven (see **Figure 1**) and covering both inshore and offshore

waters. This area was identified as important summer habitat for harbour porpoise, with Cardigan Bay also identified as being important during winter months.

Proposed Approach

- 5.18** The EIA will consider the effects of construction and operation of the marine elements of the proposed development on marine ecological receptors in the vicinity of Pembroke Dock and the wider Milford Haven. The impacts to be considered in the EIA are outlined below, although these would be expected to be localised and short lived during the construction phase and highly localised during the operational phase. These impacts will be assessed using desk based information drawing upon existing evidence available from other developments in the area and historic marine licence applications at Pembroke Dock (outlined below). This will consider impacts during the construction phase and post construction, during the operation of Pembroke Dock. The impact assessment will consider both direct impacts of the development on marine ecology (e.g. habitat loss/disturbance due to construction activities and/or presence of structures during operation) and indirect impacts (e.g. effects on water quality due to increases in suspended sediment concentrations (SSCs), resuspension of sediment bound contaminants, if any) on marine ecology receptors, with a list of the potential impacts on marine ecological receptors presented below.
- 5.19** The marine Ecological Impact Assessment (EclA) will follow the EIA methodology set out above. Specific to the marine EclA, the following guidance documents will also be considered:
- Guidelines for EclA in the UK and Ireland. Terrestrial, Freshwater and Coastal, 2nd edition (CIEEM, 2016); and
 - Guidelines for EclA in Britain and Ireland. Marine and Coastal, Final Document (IEEM, 2010).
- 5.20** In addition to these and the legislation and guidance outlined in Section 3 (e.g. Environment (Wales) Act 2016), the marine EclA will follow the legislative framework as defined by the Conservation of Habitats and Species Regulations 2017 and the Conservation of Habitats and Species Regulations 2017, the Wildlife and Countryside Act (WCA) 1981 (as amended) and the MCAA 2009 (as amended).
- 5.21** For the purposes of the impact assessment, marine ecology receptors will broadly be divided into three receptor groups: benthic subtidal and intertidal ecology, fish and shellfish ecology and marine mammals. All marine habitats and species identified as having the potential to occur in the vicinity of the proposed development will be categorised as Valued Ecological Receptors (VERs) against which impacts associated with the construction and operation of the proposed development will be assessed. VERs will include intertidal and subtidal habitats, fish and marine mammal species and communities and fish spawning and nursery habitats. Identification of VERs will give consideration to the economic, ecological and nature conservation importance of the features within a defined geographical area (i.e. Milford Haven). The sensitivity of the VERs will then be considered in the context of the magnitude of impact to determine the significance of effect, as outlined in Section 3 above.

Baseline Studies

- 5.22** The marine ecology baseline characterisation to be presented within the ES will be informed by a desk based review of a range of data sources. This will include broad scale datasets from the UK and Wales and more detailed information on the marine ecology of Milford Haven. Key data sources to be used to inform the marine ecology topic of the EIA will include:

- Historic mapping of intertidal and subtidal habitats within Milford Haven including mapping of intertidal habitats by CCW (now NRW; Brazier et al. (2007)), data from the Mapping European Seabed Habitats (MESH) mapping programme (EUSeaMap2016) and data from <http://magic.defra.gov.uk>;
- Data and reports from the Milford Haven Waterway Environmental Surveillance Group (MHWESG) including Carey et al. (2015), Little et al. (2009) and Warwick (2006);
- Relevant marine ecological information presented in reports and data from developments within Milford Haven, including studies undertaken by RPS in the vicinity of Pembroke Power Station (RPS, 2007) and South Hook Liquid Natural Gas (LNG) terminal and Combined Heat and Power (CHP) station Development Consent Order (DCO) submission (RPS, 2013);
- Relevant historic information from MHPA, including maintenance dredging assessments (Hebog, 2006);
- NRW (historically Environment Agency Wales) Water Framework Directive (WFD) sediment monitoring data, comprising particle size analysis (PSA), within the Milford Haven Inner and Milford Haven Outer waterbodies (2007 to present);
- Information on fish spawning and nursery habitats from Cefas (e.g. Ellis et al., 2010; Coull et al., 1998), academic studies on Milford Haven (e.g. Hobbs and Morgan, 1992; Clarke and King, 1985) and developments within Milford Haven (e.g. Pembroke Power Station; RPS, 2007);
- Background information on the features of SACs/SSSIs outlined in **Table 3** from NRW supporting documents for those designated sites;
- Reports and data on the distribution of marine mammals in the UK and in Wales (e.g. Strong et al., 2005; Baines and Evans, 2009; Reid et al., 2003; Small Cetaceans in the European Atlantic and North Sea I, II and III).

5.23 Consultation undertaken with NRW to date has established that they will be unable to provide any WFD benthic infaunal data for Milford Haven. Therefore, the marine ecology baseline will draw upon historic WFD data (up to 2012) for Milford Haven acquired previously from NRW for other projects in the area.

5.24 The only site-specific sampling proposed to inform the EclA is sediment chemistry sampling at four grab sampling locations in the vicinity of the slipways and the Graving Dock (NRW-MLT Marine Licence application RML1815). This data is being collected to inform the assessment of effects of resuspension of contaminated sediments on marine ecological receptors (discussed further below). Sediment sampling to support an application for disposal of dredged material will be submitted as a separate Marine Licence application.

Assessment of Effects

5.25 The following potential impacts on these receptor groups have been identified for the marine works associated with the proposed development, for each of the three marine ecological receptor groups (i.e. benthic subtidal and intertidal ecology, fish and shellfish ecology and marine mammals).

5.26 Benthic subtidal and intertidal ecology receptors

- Temporary disturbance to intertidal and subtidal habitats during construction phase;
- Effects of increases in SSCs and associated sediment deposition on intertidal and subtidal habitats because of dredging operations during the construction phase (see Chapter 6 Marine Environment – Coastal Processes below);
- Potential for resuspension of contaminated sediments with effects on benthic subtidal and intertidal receptors;
- Permanent loss of intertidal and subtidal habitats due to presence of infrastructure during operational phase;
- Risk of introduction of invasive and non-native species (INNS); and
- Effects of accidental release of pollutants (e.g. accidental spillage) on benthic species and habitats.

5.27 Fish and shellfish

- Temporary disturbance and long-term loss of fish and shellfish habitats (including spawning and nursery habitats);
- Effects of increases in SSC associated with dredging operations during the construction phase on fish and shellfish, including migratory fish species (see Chapter 6 Marine Environment – Coastal Processes below);
- Potential for resuspension of contaminated sediments with effects on designated shellfish waters;
- Effects of underwater noise on fish and shellfish species (including migratory fish); and
- Effects of accidental release of pollutants (e.g. accidental spillage) on fish and shellfish.

5.28 Marine mammals

- Effects of underwater noise on marine mammal species; and
- Effects of increased vessel activity (including vessel noise and potential vessel strike) on marine mammal species.

Issues Proposed to be Scoped Out

5.29 As outlined above and within **Table 3**, a number of features of designated sites considered in the EIA have been identified where there is no impact pathway for the marine works. As such the following features of designated sites have been scoped out of the EIA and will not be considered further:

- Features of the Pembrokeshire Marine SAC: Large shallow inlets and bays, Sandbanks which are slightly covered by sea water all the time, Coastal lagoons, Atlantic salt meadows, Submerged or partially submerged sea caves and Shore dock; and
- Cleddau Rivers SAC: Water courses of plain to montane levels with the Ranunculus fluitans and Callitriche-Batrachium vegetation, Active raised bogs, Alluvial forests with Alnus glutinosa and Fraxinus excelsior, Bullhead and Brook lamprey.

Chapter 7: Marine Environment – Coastal Processes

- 5.30 This chapter will provide an assessment of the coastal processes effects of the proposed development during the construction and operational phases. The assessment will be undertaken by RPS Consulting Services Ltd.

Baseline Information

- 5.31 Milford Haven is a deep-water inlet believed to be created by the flooding of the Daugleddau river valley (which itself was formed by the merging of the tributaries of the Eastern and Western Cleddau), during the sea level rise at the end of the last Ice Age (Halcrow, 2012). It is the largest flooded valley in Europe and is also a historical deep-water anchorage. Milford Haven has the capacity to be a large sediment sink, based on its morphology, however there is limited sediment input from offshore areas and the rivers flowing into the Haven are not thought to contribute large volumes of sediment (Halcrow, 2012). Within the catchment are the two main rivers of the Western and Eastern Cleddau, which merge to form the Daugleddau before entering the Haven. Pembroke River also flows to the Haven just west of Pembroke Dock.
- 5.32 Hobbs and Morgan (1992) describe the geomorphological processes that have resulted in the unusually high proportion of hard substrates within the Haven, flanked by areas in which there are substantial thicknesses of mud. Near the mouth of the Haven, which is exposed to the greatest wave action, the intertidal and subtidal areas are largely coarse sediments and bedrock, while further up the Haven where wave action is reduced, intertidal and subtidal areas are characterised more by muddy sediments. These areas of mud were derived from the rivers and have accumulated primarily in sheltered mudflats, including the area between Carr Jetty (immediately to the west of Pembroke Dock) and Hobbs Point (to the east of Pembroke Dock). Sediment transport close to the shoreline is generally from west to east and tends to be finer sediments due to the generally low tidal currents in the estuary; Atkins (2002) concluded that drift along the frontage of the south shore of Milford Haven is west to east, although this is variable. As detailed above, the sediments in the vicinity of the proposed marine works at Pembroke Port are largely comprised of mud, with coarser sediments known to occur to the north and northwest.
- 5.33 Carrs Rock, immediately to the west of Carr Jetty and Pembroke Port, is a submerged bedrock feature which deflects tidal currents and forces the flow to the north side of the Haven. Headlands such as Carrs Rock and Hobbs Point (to the east of Pembroke Port) appear to deflect tidal currents, providing shelter in their lee. A substantial area of coarser sediment has been noted in the central Haven extending from Newton Noyes (to the east of the town of Milford Haven) to Carr Jetty.
- 5.34 The high tidal range within Milford Haven means that water movements in the estuary are extensive. The tidal excursion (the horizontal distance along the estuary that a particle moves during one tidal cycle of ebb and flood) varies along the length of the estuary and is approximately twice as great for springs as for neaps. Strong south-westerly winds, the prevailing wind direction for the Haven, can cause noticeable variations in the heights and times of the tide.

Proposed Approach

- 5.35 The EIA will consider the effects of construction and operation of the marine elements of the proposed development on the coastal processes in the vicinity of Pembroke Port. The impacts to be considered in the EIA are outlined below, although these would be expected to be localised and short lived during the construction phase and highly localised during the operational phase. These impacts will be

assessed conceptually based on an understanding of the local processes and the nature of the proposed activities, with no site specific coastal processes modelling undertaken. The assessment will draw upon existing evidence available from other developments in the area and historic marine licence applications at Pembroke Port (outlined below). This will consider both the direct impacts of the development on the water quality and hydrodynamic regime of the Haven and will be used to inform the EIA on marine ecological receptors (e.g. increases in SSC).

Baseline Studies

5.36 The following desktop sources will be used to support the baseline characterisation and EIA on coastal processes for the proposed development:

- Information to support historic applications for maintenance dredging operations at Pembroke Dock;
- Lavernock Point to St Ann's Head Shoreline Management Plan (SMP2; Halcrow, 2012); and
- Relevant coastal processes information from other developments in Milford Haven including South Hook LNG terminal and CHP station, Pembroke Power Station.

Assessment of Effects

5.37 The following potential impacts on coastal processes have been identified which may occur during the construction and operational phases of the proposed development.

- Increases in suspended sediment concentrations and associated sediment deposition as a result of capital dredging operations during the construction phase; and
- Changes to hydrodynamic regime in the vicinity of Pembroke Port during the operational phase.

Marine Environment – Other Issues Proposed to be Scoped Out

Commercial and Recreational Fisheries

5.38 Within Milford Haven there is limited commercial fishing activity. Use of towed gear (including trawls) is not permitted within the Haven and therefore potting for crabs and lobster is the main fishing activity, although this is largely focussed to the west of Pembroke (Pawson *et al.*, 2002). There is some recreational fishing activity within the Haven and molluscs (e.g. periwinkles and mussels) are also hand collected.

5.39 There is no commercial or recreational fishing activity in the vicinity of Pembroke Port and due to the highly localised and short-term nature of the proposed works, no impacts on commercial or recreational fisheries are anticipated.

5.40 Therefore, this topic has been scoped out of the EIA and will not be considered further. Effects on fish and shellfish receptors (including designated shellfish waters) are considered above.

Shipping and Navigation

5.41 MHPA is responsible for all navigation within Milford Haven, including Pembroke Port. During construction, all contractors for the marine elements of the proposed development will be contracted directly by MHPA and will be required to liaise with it when undertaking works in the marine

environment to ensure no conflicts with any other marine users. Furthermore, the works will be largely restricted to the immediate vicinity of Pembroke Port (i.e. within and close to the red line boundary shown in **Figure 1**). During normal operation, vessel movements to and from Pembroke Port and notifications to all mariners in the waterway about any works will be managed by MHPA as is currently the case.

- 5.42 There is no potential for significant effects on shipping and navigation within Milford Haven as a result of the proposed development and as a result this topic has been scoped out of the EIA and will not be considered further.

Chapter 8: Noise and Vibration

- 5.43 This chapter will provide an assessment of noise and vibration effects of the proposed development during the construction and operational phases. The assessment will be undertaken by RPS Consulting Services Ltd.

Baseline Information

- 5.44 The site is located in a rural coastal area, which has similar operations in the vicinity. There are houses adjacent to the south of the eastern part of the site on The Terrace and to the east of the site on Commercial Row. There are also houses located approximately 100m from the remaining part of the southern perimeter on St Patrick's Hill and Southampton Row. There is a hospital adjacent to the south of the site on Fort Road. All of these uses are sensitive to noise and vibration. Overall, there are potentially around 500 properties that are potentially affected by construction and operational noise and vibration activity.

- 5.45 The site and adjacent areas are currently operational as a port and include the following noise generating activities:

- Cargo handling including animal feedstuff, dredged aggregates and baled waste;
- Berthing and refuelling of ships;
- Tug mooring and boat services;
- Treatment and baling of refuse derived fuel; and
- Other light industrial uses some of which are port related, others not.

- 5.46 The main existing sources of noise at the closest houses are likely to be sea-going vessels and existing activities at the port, including loading and unloading of vessels, processing of materials to be loaded and/or unloaded, other industrial activity on site, movement of HGVs and any fixed mechanical plant. Noise from non-port related road traffic within the area is likely to be low.

Proposed Approach

Baseline Sound Monitoring

- 5.47 In order to characterise the existing baseline sound environment, three long term surveys are proposed to be located at the nearest noise sensitive receptors to the site over a seven-day period. Proposed locations are indicated in **Figure 5** and, at one site, a meteorological station will be co-located

with the logging sound level meter. Measured data will take account of weather conditions during the survey in order to obtain representative baseline ambient and background sound levels commensurate with the requirements of British Standard (BS) 4142:2014 'Methods for rating and assessing industrial and commercial sound'.

Assessment of Potential Noise and Vibration Effects

- 5.48** All construction works have potential to cause adverse noise effects during the construction phase. Due to the proximity of receptors there is also the potential for vibration effects during the construction phase if vibratory compaction or piling is required. However, offsite effects from this are unlikely.
- 5.49** For the operational phase, the activities likely to cause the greatest noise impact are increases to the number of vessels accessing the site, increased cargo handling and increased HGV movements on site, including heavier loads. Activities within the renewable energy device assembly areas and fabrications for other activities also have the potential to generate high levels of noise.
- 5.50** There is also the potential for an increase in the number of HGVs accessing and egressing the site so noise from off-site traffic will also be considered.
- 5.51** There is also potential for cumulative noise effects with other operational sites within Pembroke Dock.

Scope of Construction Noise and Vibration Assessment

- 5.52** Effects from construction noise and vibration will be considered with respect to the guidance in BS 5228:2009+A1:2014 'Code of practice for noise and vibration control on construction and open sites – Part 1: Noise' and 'Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration', the Welsh Government Technical Advice Note 11: Noise (TAN11), CL-05-15 updates to TAN11 and relevant local policy. General activities will be considered qualitatively, and numerical assessments will be undertaken for significant works, such as piling. The assessment will consider the potential for significant effects to arise with respect to the magnitude of noise from the works, the sensitivity of receptors, and the duration of the works. Mitigation measures will be described where these are considered necessary.

Scope of Operational Noise Assessment

- 5.53** The noise assessment will consider noise effects from the proposed development in accordance with BS 4142:2014, TAN11, CL-05-15, updates to TAN11 and relevant local planning policy. In accordance with the assessment procedure set out in the Standard, noise from a worst case 1-hour period during the daytime (07:00 – 23:00 hrs) and 15-minute period during the night-time (23:00 – 07:00 hrs) will be predicted at the noise sensitive receptors. This assessment will consider the expected duration, frequency and onset of the noise impacts as well as the character of the noise and the context in which the noise occurs, as required.
- 5.54** Noise from traffic and mobile plant within the development will be considered as part of the BS 4142:2014 assessment. Off-site traffic will be considered with respect to the Guidance in the Design Manual for Roads and Bridges Volume 11 Section 3 Part 7 Noise and Vibration ('DMRB') based upon the criteria for effects in the long term as no new highways are proposed.
- 5.55** The assessment will consider the potential for significant effects to arise with respect to the magnitude of noise from the development and the sensitivity of receptors. Mitigation measures will be described

where these are considered necessary. Potential increases in noise will also be considered cumulatively with other operational sites within Pembroke Port.

Issues Proposed to be Scoped Out

- 5.56 Operational vibration effects from activities on the site are likely to be well below any thresholds that would normally require assessment for offsite receptors, so this aspect is scoped out of our assessment.

Chapter 9: Air Quality

- 5.57 This chapter will provide an assessment of air quality effects of the proposed development during the construction and operational phases. The assessment will be undertaken by RPS Consulting Services Ltd.

Baseline Information

- 5.58 The application site is approximately 3km to the north-west of an Air Quality Management Area ('AQMA') at Westgate Hill, designated by PCC due to high levels of nitrogen dioxide (NO₂) pollution from road traffic. The site is also in proximity to the Pembrokeshire Marine SAC and the Milford Haven Waterway SSSI.
- 5.59 The current air quality conditions in the area will be established with specific regard to the findings of PCC's Review and Assessment process, the results of available local monitoring and Defra mapped concentration estimates.
- 5.60 The table below provides a comparison of the Defra mapped concentration at the site and the relevant limit values in the EU Air Quality Directive [i] and the relevant objectives in the UK Air Quality Strategy [ii].

Table 4: Concentration at the Application Site and the Relevant Limit Values in EU Air Quality Directive and Relevant Objectives in UK Air Quality Strategy

Pollutant	Defra Mapped Concentration Estimate (µg.m-3)	EU Air Quality Limit Value/Air Quality Strategy Objective (µg.m-3)
Nitrogen Dioxide (NO ₂)	9.9	40
Particulate Matter with a Mean Aerodynamic Diameter less than 10 microns (PM ₁₀)	13.1	40
Particulate Matter with a Mean Aerodynamic Diameter less than 2.5 microns (PM _{2.5})	8.3	25

- 5.61 The key objectives of the Air Quality Assessment will be the impact of the scheme on the surrounding area, including any impacts on the Westgate Hill AQMA and habitats sensitive to air pollution within the SAC and the SSSI.

Proposed Approach

- 5.62 The risk of impacts due to dust and emissions during the demolition/construction phase will be assessed, with regard to the Institute of Air Quality Management (IAQM) 'Guidance on the assessment of dust from demolition and construction'. Generic mitigation measures, consistent with the level of risk, will be drawn from the IAQM guidance.
- 5.63 The traffic generated by the operational phase of the proposed development will be compared with the relevant indicative trigger criteria for determining when an air quality assessment is required in the 2012 Air Quality: A Guide for Developers document (developed jointly by Carmarthenshire County Council, Ceredigion County Council, Pembrokeshire County Council and Powys County Council). The indicative trigger criteria will be applied to routes within 200m of human-health receptors and sites designated for their ecological importance.
- 5.64 In the event that the traffic generated by the operation of the development is below the trigger criteria, the assessment will conclude that the air quality effects are not significant.
- 5.65 In the event that the traffic generated by the operation of the development is above the trigger criteria, a detailed air quality assessment will be undertaken. For the detailed assessment:
- Existing air pollution levels at locations around the site will be predicted using the detailed dispersion model, ADMS Roads, with a view to verifying and, if necessary, adjusting model input parameters and correcting the model output in line with good practice.
 - Future air pollution levels at existing human-health receptors around the site will be predicted using the ADMS Roads model in the first fully operational year, with and without the proposed development.
 - Future air pollution levels at nature conservation sites within 200 m of roads affected by the site will be predicted using the ADMS Roads model in the first fully operational year, with and without the proposed development. From the predicted concentrations, nutrient nitrogen and acid deposition rates will be calculated.
 - The significance of the illustrated effects will be determined using professional judgement and criteria definitions from the Environmental Protection UK (EPUK)/IAQM (January 2017) Land-Use Planning & Development Control: Planning for Air Quality document.
 - Generic mitigation measures to improve air quality during the operational phase where the results of the assessment show any adverse air quality effects arising from the proposed development. This will comprise a qualitative recommendation.

Chapter 10: Historic Environment

- 5.66 This chapter will provide an assessment of the historic environment effects of the proposed development during the construction and operational phases. The assessment will be undertaken by RPS Consulting Services Ltd.

Baseline Information

- 5.67 The site falls wholly within the Pembroke Dock Conservation Area ('CA') and within the Milford Haven Waterway Landscape of Outstanding Historic Interest ('LOHI') in Wales. Located within the site is a

Grade II* listed former Graving Dock, two slipways each separately listed at Grade II, a Grade II listed former timber pond (also known as the pickling pond) and a Grade II listed former dockyard foremen's office. The perimeter wall of the dockyard is also Grade II listed.

- 5.68 There are numerous listed buildings within the historic dockyard but outside of the site. These include the Grade I listed Paterchurch Tower, which is also a Scheduled Ancient Monument ('SAM'), and several Grade II* and Grade II listed structures. Just outside the dockyard are two Grade II* listed gun platforms (sometimes referred to as Martello towers). One of these gun platforms is also a SAM and there is a further SAM just outside the historic dockyard – this comprises the remains of two bomb store buildings that date to just before the Second World War when the dockyard was used as a base for flying boats. Slightly further away is a defensible barracks of mid-19th century date which is a Grade II* listed building as well as a SAM.
- 5.69 The principal archaeological interest of the site stems from the potential for remains of several key periods to be present. These include:
- Medieval and post-medieval material associated with a manorial complex centred on Paterchurch Tower;
 - Material associated with the mid-18th century Paterchurch Fort – an unfinished defensive facility;
 - Material associated with the establishment and use of the historic Admiralty dockyard from 1812 – 1926; and
 - Material associated with the RAF occupation of the dockyard from 1930 – 1959.

Proposed Approach

Baseline Studies

- 5.70 A Historic Environment Desk-based Assessment ('DBA') is currently being prepared in accordance with a Specification that has been submitted to and approved by the curatorial section of the Dyfed Archaeological Trust ('DAT'). This DBA will examine all available sources of information pertaining to the archaeology of the site and surrounding area and the historic development and use of the dockyard. It will include marine heritage assets as well as a consideration of marine archaeology potential. All designated heritage assets will be clearly identified in the DBA.
- 5.71 The major sources of information to be consulted will include the regional Historic Environment Record (HER), the Pembrokeshire Archives and Local Studies, Cŏf Cymru (the on-line National Historic Assets of Wales Register), the Royal Commission on the Ancient and Historical Monuments of Wales, the National Library of Wales, the National Archives (Kew), archive information held by MHPA and records made during site visits.
- 5.72 The baseline assessment will identify the presence of both designated and non-designated assets within the study area and will take into account the guidance provided by the Chartered Institute for Archaeologists (CIfA) for the preparation of desk-based assessments.
- 5.73 This will include identification of all heritage assets that could be affected by the proposed development, provision of a description of the significance (importance) of those assets, including the contribution made by their setting. Setting assessments for designated heritage assets will follow national guidance contained within the Cadw (2017) document Setting of Heritage Assets in Wales.

5.74 A second baseline report will also be prepared. This will be a Built Heritage Statement of Significance that will expand upon an earlier Heritage Assessment prepared by Turley Heritage in 2016. The Built Heritage Statement of Significance will identify all parts of the existing built heritage that could be affected by the proposed development and will identify the significance of each of these buildings or each part of the building if appropriate.

Legislation, Policy and Guidance

5.75 The ES chapter will review the legislative, policy and guidance framework relevant to the historic environment and will also set out an appropriate methodology for the assessment of impacts and effects on the historic environment.

Assessment of Effects

5.76 The masterplan includes elements that have the potential to result in significant adverse effects on the historic environment. These would result from the infilling of the Grade II* former graving dock and the Grade II listed former timber pond, also the demolition of the Grade II listed former dockyard foremen's office and the removal of parts of the two Grade II listed slipways (whilst retaining as much as possible of the historic fabric). Where possible the development would be designed such that the adverse effects are fully or partially reversible. There are also proposals that would have positive effects on the historic environment included within the masterplan such as the refurbishment of some listed buildings within the Port.

5.77 There could also be adverse effects resulting from changes within the settings of designated heritage assets, from changes to the character and appearance of the CA, from impacts on the registered LOHI, from physical impacts to buried archaeological remains and from the removal of marine sediments.

Scope of the Assessment

5.78 The assessment of the likely effects on the historic environment will include the following activities:

- Identification of all heritage assets that could be affected by the proposed development, along with provision of a description of the significance (importance) of those assets including the contribution made by their setting;
- Identification of the likely effects of the proposed development on heritage assets within the site and an appropriate study area centred on it; and
- Assessment of significance of effects, taking into account measures proposed to avoid, reduce or offset adverse effects.

5.79 Assessment will be in the form of a matrix-based approach that examines the importance or value of the heritage asset against the magnitude of impact on that asset, leading to an identified significance of effect. This approach will be underpinned by a suitable narrative that explains how the importance or value of the asset has been appraised and how the magnitude of impact has been assessed.

5.80 The potential impact and effect of the proposed development on the Milford Haven Waterway LOHI will be undertaken by way of a formal Assessment of the Significance of the Impact of Development on Historic Landscape Areas on the Register of Landscapes of Historic Interest in Wales, in accordance with the guidance provided in the 2nd edition of the Guide to Good Practice on using the

Register of Landscapes of Historic Interest in Wales in the Planning and Development Process – usually referred to as the ‘ASIDOHL2’ process.

Issues Proposed to be Scoped Out

- 5.81 It is proposed that no archaeological fieldwork is conducted to inform the EIA process, as it is believed that adequate records exist for the establishment of an accurate baseline position and an assessment of impacts and effects. Any such fieldwork would have to take place within a working dockyard and would give rise to issues of health and safety as well as security.

Chapter 11: Transportation

- 5.82 This chapter will provide an assessment of transportation effects of the proposed development during the construction and operational phases. The assessment will be undertaken by Lime Transport Ltd.

Baseline Information

Planning Policy Context

- 5.83 For the purpose of this ES Scoping Report, current national and local transport planning policy relevant to the proposed development has been reviewed, including:
- Wales Spatial Plan – People, Places, Futures (November 2004);
 - Planning Policy Wales (Edition 9, November 2016);
 - One Wales: Connecting the Nation;
 - Technical Advice Note (TAN) 18 (2007);
 - Active Travel Bill 2013 (Wales);
 - Pembrokeshire Local Development Plan (2013) Planning Pembrokeshire’s Future (up to 2021);
- 5.84 Current transport policies at the national and local level are built around the central themes of long-term sustainable development, sustained investment in transport and improved accessibility at all levels. These policies promote continued economic growth through the provision of an efficient and reliable transport system, a reduction in traffic congestion, improvements in highway safety, and enhancements to the accessibility of sustainable modes of travel.
- 5.85 The key objectives of the transport strategy for the proposed development is to deliver sustainable, safe transport to support the proposed development.
- 5.86 Pembroke Dock is included in the strategic Hub of ‘Haven Towns’ and considered as an important regional role for the area which should be a focus for future investment. The LDP complements the Wales Spatial Plan and the Pembrokeshire Community Plan.
- 5.87 PCC has identified Infrastructure, Transport and Accessibility (SPG 10) as strategic objectives of the LDP, and a need for significant investment in the current transport infrastructure, for example dualling the A40 and improving the A477. It is understood that WSP has been appointed to undertake a study into required transport improvements and that consultation with key stakeholders, including MHPA, is about to commence.

5.88 The overarching aim of the LDP is to ensure that sustainable development is achieved. This means ensuring that the types of development that take place are appropriate for their location and built and designed in such a way as to achieved positive economic, social and environmental impacts, and adverse impacts minimised. Furthermore, the LDP states that improvements to the existing transport infrastructure that will increase accessibility to employment, services and facilities, particularly by sustainable means will be improved.

5.89 It is considered that the proposed development complies with the relevant national and local land use and transport policies as it:

- Encourages accessibility by walking, cycling and public transport with having good access to key services and facilities;
- Development is located near other related uses to encourage multi-purpose trips and reduce the length of journeys;
- The development would have safe access to the highway network and would not cause traffic congestion or exacerbate existing traffic congestion; and,
- Enables the supply of renewable energy through environmentally acceptable solutions.

Accessibility by Walking, Cycling and Public Transport

5.90 The site is located with the existing dockyard at Pembroke Port, and is bounded by:

- Commercial Row and Front Street to the east;
- Meyrick Owen Way to the south; and,
- The Cleddau Estuary to the north and west;

5.91 It is considered that the site is accessible by walking, cycling and public transport as described in the following paragraphs.

Walking

5.92 Existing pedestrianised footpaths are located to the south of the dockyard that provide good access from the site to local amenities and public transport connections.

5.93 The majority of roads within the vicinity of the site have footways on one or both sides of the carriageway, providing links between the site and surrounding area, including Meyrick Owen Way, Commercial Row and Western Way.

5.94 The Chartered Institution of Highways and Transportation ('CIHT') 'Providing for Journeys on Foot' indicates that the desirable walking distance for commuting and school journeys is 500 m, the acceptable walking distance is 1 km, and 2 km is the preferred maximum.

5.95 **Figure 6** shows 1.2 km isochrones (divided into 200 m bands from the centre of the site), with local amenities within walking distance of the site and the nearby town centre.

Cycling

- 5.96 Pembroke Dock benefits from being located adjacent to Route 4 of the National Cycle Network ('NCN').
- 5.97 Route 4 is a long-distance route between London and Fishguard via Reading, Bath, Bristol, Newport, Swansea, Carmarthen, Tenby, Haverfordwest and St. David's. The route that passes through Pembroke Dock, from Swansea to Fishguard, known as the Celtic Trail West, provides good connections to Pembroke, Milford Haven and Tenby. The local cycle infrastructure is shown in **Figure 7**.

Bus Services

- 5.98 The closest bus stop from the site is located on Highland Place approximately 350m to the south of the site, which provides regular connections to Haverfordwest, Tenby, Milford Haven and Monkton.
- 5.99 The location of the closest bus stops, together with bus routes that call at these stops is shown in **Figure 8**, and **Table 5** provides a summary of the routes serving the closest bus stops to the site.

Table 5: Summary of Bus Routes and Timetable

Route no.	Distance to site (m)	Route	Weekday frequency
Sunderland Avenue, Melville Terrance, Pembroke Dock			
348	350	Haverfordwest - Tenby	3 per hour
348	350	Tenby - Haverfordwest	1 per hour
349	350	Haverfordwest - Tenby	3 per hour
349	350	Tenby - Haverfordwest	1 per hour
356	350	Milford Haven - Monkton	1 per hour
356	350	Monkton - Milford Haven	1 per hour
Albion Square, B4322, Pembroke Dock			
361	600	Tenby - Pembroke Dock	4 per day
361	600	Pembroke Dock - Tenby	4 per day

Rail Services

- 5.100 Pembroke Dock train station is located approximately 1.2km east of Pembroke Port and is accessible via Commercial Row, Queen Street and Apley Terrace.
- 5.101 At the time of writing the station is operated by Arriva Trains Wales and offers a pay and display car park consisting of 20 spaces.
- 5.102 The train line terminates at Pembroke Dock and provides connections to Tenby, Saundersfoot, Carmarthen and Swansea every two hours. Swansea provides onward connections to Cardiff, Newport and stations to the South West, Midlands, London and North West of England.
- 5.103 Connections to Haverfordwest, Milford Haven and the west can be made at Whitland. However, it is considered that the bus service is likely to be the preferred mode of public transport for this route due to the frequency of the service and the journey time.

Highway Network

5.104 The local highway network is shown in **Figure 9** and a description of the local highway network is outlined in **Table 6** below.

Table 6: Description of the Local Highway Network

Description	
Meyrick Owen Way	
Description	Single carriageway acts as the main access route into the development site. Pembroke Dock yard located to the north of the road with open space and residential development to the west.
Width	9m
Speed limit	30mph
Street lighting	Present throughout length of road
Crossing facilities	Double kerb and tactile pavement located near access to Melville Street.
Bus route	No
Character	Wide distributor commuter road connecting Pembroke Dockyard with Pembroke Dock town centre.
On-street parking	No restrictions present along majority of road. Double yellow lines are present by the entrance to Melville Street and Pembroke Street.
Commercial Row	
Description	Residential and shop frontage on the street at the eastern side of the road with parking bays located along the west.
Width	7.6m
Speed limit	30mph
Street lighting	Yes
Crossing facilities	Non-present
Bus route	No
Character	Trees located to the west of the side with residential terrace housing adjacent to the road.
On-street parking	Double yellow lines present at the Albion Square, Pembroke Street junction. Other than this, no restrictions exist. Parking bays are available on the western side of the road with no restrictions.
Pembroke Street	
Description	Consist of a one-way single carriageway heading southbound, which changes into a two-way single carriageway after the Melville Street roundabout.
Width	4.7m along the one-way single carriageway, increases to approximately 9m when the road changes to two-way.
Speed limit	30mph
Street lighting	Yes
Crossing facilities	Non-present
Bus route	Yes
Character	Local amenities including shops, bars and restaurants are located on eastern side of the one-way single carriageway, with residential development fronting the street once the road become two-way.
On-street parking	Within the one-way single carriageway parking bays are located on the eastern side with no restrictions. Once the road becomes two-way, parking bays are located on either side of the carriageway allocated to resident permit holders only.
A4139	
Description	Single carriageway distributor road linking the north of the town.
Width	Generally 9.7m
Speed limit	30mph

Street lighting	Yes
Crossing facilities	Dropped kerb and tactile pavement located at junctions to minor distributor roads. Pedestrian crossings located at the entrance to major supermarket stores.
Bus route	Yes
Character	Residential development fronting the street on both sides of the carriageway. Also, the presence of local amenities, including pubs, restaurants and hotels, and major supermarkets and convenience stores.
On-street parking	Double yellow lines present throughout length of road

5.105 The A4139 links with the A477 at approximately 1.25 km to the east of the site, which provides road connections to Haverfordwest, North Pembrokeshire and beyond to the north and the UK trunk road and motorway network via the A40, A48 and M4 to the east. The A477, A40, A48 and M4 form part of the Europe-wide Trans-European Transport Network ('TEN-T').

Personal Injury Accident (PIA)

5.106 Personal Injury Accident (PIA) data has been obtained for the period 2013 to 2017 (inclusive) which includes the proposed site and the surrounding area. **Figure 10** below shows the location and severity of accidents that occurred during this period. The severity of accidents and number of casualties per year is summarised in **Table 7** below.

Table 7: Summary of Personal Injury Accident Data

Year	Personal injury			No. of casualties	Collisions involving vulnerable users			
	Fatal	Serious	Slight		Cyclist	Child	m/cyclist	Pedestrian
2012	0	0	6	6	0	3	0	2
2013	0	2	5	9	1	1	0	3
2014	0	0	1	1	2	2	0	0
2015	0	1	1	2	0	0	1	0
2016	0	0	1	1	0	0	0	0
Total	0	3	14	19	3	6	1	5

5.107 It can be seen that there was a total of 17 accidents within the study area over the most recent five-year period, resulting in a total of 19 casualties.

5.108 It can also be seen that of the 17 accidents, 14 (82%) resulted in slight injuries being sustained and the remaining three accidents (18%) resulting in serious injuries being sustained. No accidents resulted in fatal injuries.

5.109 Looking at the accidents in more detail, a high proportion of the accidents involved vulnerable users, with child casualties reported in six accidents and pedestrian casualties reported in five accidents. **Figure 10** highlights a cluster of accidents on Bush Street. However, it is unlikely to be the preferred access route to the proposed development and would therefore have limited impact as a result.

5.110 Given the relatively large area covered, it can be concluded that there is no particular highway safety problem on the local highway network. It is unlikely that the proposed development will have any adverse effect on the current injury accident data and is unlikely to increase the potential for any accidents of vehicles or people to occur.

Proposed Approach

5.111 The ES chapter will consider the environmental effects in relation to the traffic generation of the proposed development, including considering the following:

- Setting out the assessment methodology to consider the effects of the proposed development on the surrounding transport network;
- Audit the baseline conditions of the surrounding transport network;
- Assess the effects related to traffic generated by the development including the effect of the change in traffic flows;
- Identify measures required to prevent, reduce or off-set potential adverse effects; and,
- Set out any residual effects after these measures have been implemented.

5.112 The IEMA guidance suggests that the scale and extent of the assessment should be limited to traffic flow increases of 30% (10% if affecting a sensitive area). The guidelines state that projected changes in traffic less than 10% creates no discernible environmental effect, given that daily variations in background traffic flow may fluctuate by this amount, and that a 30% change in traffic flow represents a reasonable threshold for including a highway link in an assessment.

Baseline Studies

5.113 To establish the baseline situation, traffic survey data will be commissioned by MHPA to establish vehicle flows for both the morning and evening peak periods for all junctions throughout the study area. In addition, a 24-hour Automatic Traffic Count (ATC) data was installed at the Admiralty Way (North)/White Farm Way junction. A detailed site audit has also been undertaken of the local highway network.

Identification and Assessment of Effects

5.114 The assessment of significance will consider the existing highway network as a baseline and predict the future effect on the highway for both the construction and operational phases of the proposed development. The assessment will take into consideration the requirement for mitigation measures to reduce the effect of the proposed development. The significance of an effect depends on both the sensitivity of the receptor and the degree to which the receptor would be affected. The magnitude of each potentially significant effect will be considered and an assessment made as to whether the proposed development would result in negligible, minor, moderate or major effects. Vehicle routes will be identified in terms of their percentage increase in traffic.

5.115 The criteria used to determine the significance and magnitude of each of the traffic-related environmental effects is summarised below (and based on the IEMA guidelines):

- Construction – transport effects associated during the construction phase in terms of increase in traffic volume and number of HGVs;
- Severance – the perceived division that can occur within a community when it becomes separated by a major traffic artery either physically or by increased traffic volumes. The guidelines advise that changes in traffic flow of 30%, 60% and 90% are regarded as producing slight, moderate and

substantial changes in severance respectively. Marginal changes in traffic flow are unlikely to increase or remove severance and consideration should also be given to road width, traffic flow and composition, traffic speed, the availability of crossing facilities and the number of pedestrians likely to cross the affected route;

- Driver delay – delay to non-development traffic as a result of the additional traffic on the network. This is considered significant when the traffic on the network is already at, or close to, capacity (ratio of flow to capacity of 0.85);
- Pedestrian amenity and delay – effects associated with changes in traffic flow, speed and footway width/separation from traffic. The guidelines state that the effect may be considered significant where the traffic flow is halved (beneficial) or doubled (adverse). There are no set thresholds for pedestrian delay;
- Cyclist amenity and delay – effects associated with changes in traffic flow and speed;
- Fear and intimidation – effects experienced by pedestrians associated with increase in traffic volume, speed and HGV composition and the proximity of this traffic. There are no set thresholds for this issue; and,
- Accidents and safety – effects associated with the change in character of the traffic as a result of the development. Assessment of the likely increase in risk is required but no thresholds are set due to the complexity of potential factors causing personal injury accidents.

5.116 The magnitude of effect will be assessed on the following basis:

- High – considerable deterioration/improvement;
- Moderate – readily apparent change;
- Low – perceptible change; and,
- Negligible – no discernible change.

5.117 A seven-point scale will be used to record any likely significant environmental effects. The scale is derived from the interaction of the receptor sensitivity and magnitude of change of effect.

Scope of the Assessment

5.118 The scope of the Transport Assessment (TA) that forms the basis for this ES chapter will be agreed by PCC, as Highway Authority, prior to the submission of the application. The proposed TA will be produced in line with national guidance and consider the effects of the proposed development on the agreed extent of highway network. A Travel Plan will also be produced in line with national guidance. The TA will detail all aspects of the proposed development related to its transport characteristics and their effect, as follows:

- Review of national, regional and local policy;
- Audit of the existing transport conditions surrounding the application site;
- Description of the proposed development including means of access;

- Prediction of the transport characteristics associated with the proposed development including development traffic trip rates, distribution and assignment;
- Analysis of the effect of the proposed development on the surrounding highway network for the future year assessment of 2021 with background growth and committed and unconsented schemes added.

Study Area

5.119 The extent of the study area to be considered in the TA will be agreed with the local authority and include the following links and junctions (as shown in **Figure 9**):

- Junction 1: Admiralty Way/Meyrick Owen Way/Whites Farm Way mini-roundabout;
- Junction 2: Fort Road/ Admiralty Way/ Melville St/ Melville Terrace.
- Junction 3: Melville Street/Market Street mini-roundabout;
- Junction 4: Meyrick Owen Way/ Market St; and,
- Junction 5: Pembroke Street/Melville Street/B4322 mini-roundabout;
- Junction 6: Gate 1 Access/Front St/Commercial Row/ Western Way;
- Junction 7: B4322/ Western Way/A4139/Pier Road roundabout;
- Junction 8: A477/ A4139 / London Road/ Waterloo Road roundabout.

Traffic Growth

5.120 In terms of background traffic growth, NTM/Tempo adjusted growth rates will be agreed with the Highway Authority prior to undertaking any analysis.

Development Trip Generation

5.121 The likely volume of vehicle trips generated by the proposed development will be based on the volume of trips generated by the existing uses on the site, which have been established from traffic surveys at the existing port. **Table 8** shows the current vehicle trip rates, including staff vehicles (cars) and good vehicles (HGVs).

Table 8: Vehicle Trip Rates

Time period	No. of arrivals	No. of departures	Total no. of movements
Car (staff vehicles)			
0800 - 0900	26	10	36
1700 - 1800	6	22	28
0700-1000 and 1500-1800	97	130	227
HGV (goods vehicles)			
0800 - 0900	13	7	20
1700 - 1800	6	17	23
0700-1000 and 1500-1800	49	62	111

- 5.122 It can be seen from **Table 8** that Pembroke Port currently generates a total of 227 car movements and 111 HGV movements between 7:00 - 10:00 and 15:00 - 18:00.
- 5.123 The two-way ferry terminal at Pembroke Port operates at specific times daily. Arrivals are at 02:45 and 14:45 and departures leave at 00:45 and 12:45. This information can be used to identify potential peaks in traffic flow throughout the day as a result of the ferry terminal. Furthermore, this information shows that the ferry terminal is unlikely to generate any increase in traffic during peak times.
- 5.124 Therefore, it can be assumed that the biggest proportions of car movements during peak times is from staff, with a minority obtained from visitors arriving and departing for the ferry terminal. The HGV vehicle movements are a result of non-ferry terminal activities at the port.

Development Trip Assignment

- 5.125 The likely distribution of staff trips has been based on the ‘Journey to Work’ datasets from the 2011 Census data. **Figure 11** shows the percentage distribution of staff working at Pembroke Port, and it can be seen that approximately 35% of staff live and work in Pembrokeshire. The remaining commuters travel from Pembroke, Lamphey, Milford Haven and Neyland. This is summarised in **Table 9** below.

Table 9: ‘Journey to Work’ Census Data

Place of Work	Origin	Percentage (%)
Pembroke dock	Pembroke Dock	35
Pembroke dock	Pembroke	14
Pembroke dock	Lamphey	10
Pembroke dock	Milford Haven	9
Pembroke dock	Neyland	8
Pembroke dock	Saundersfoot, Haverfordwest, Fishguard, Carmarthen etc.	27

- 5.126 It has been assumed that large goods vehicles will travel along the Strategic Road Network as identified in **Figure 11** which includes the primary and secondary access routes to the site.

Scenarios for Testing Capacity of Highway Network

- 5.127 The capacity analysis modelling of the highway network surrounding the application site will consider the following scenarios:
- 2018 base:
 - 2021 first occupation;
 - 2024 full implementation; and,
 - 2039 full implementation + 15 years.

Junction Capacity Assessments

- 5.128 The junctions to be analysed as part of this ES chapter include percentage impact analysis of:

- Junction 1: Admiralty Way/Meyrick Owen Way/Whites Farm Way mini-roundabout;
- Junction 2: Fort Road/ Admiralty Way/ Melville St/ Melville Terrace.
- Junction 3: Melville Street/Market Street mini-roundabout;
- Junction 4: Meyrick Owen Way/ Market St; and,
- Junction 5: Pembroke Street/Melville Street/B4322 mini-roundabout;
- Junction 6: Gate 1 Access/Front St/Commercial Row/ Western Way;
- Junction 7: B4322/ Western Way/A4139/Pier Road roundabout;
- Junction 8: A477/ A4139 / London Road/ Waterloo Road roundabout.

5.129 Full capacity analysis will be carried out on any junction that exceeds a 5% capacity increase.

Sensitive Receptors

5.130 Sensitive areas are defined by the presence of sensitive receptors. Within this assessment the potential effects have been considered as follows:

- On local roads and the users of these roads;
- On land uses fronting these roads.

5.131 Sensitive receptors within the study area will be agreed with PCC. Sites considered to be sensitive include schools and colleges, community facilities including parks, health facilities and congested areas of the highway network. In these areas, lower increases in vehicle flow may increase the significance of effect. Additionally, the status of the receptor within the movement hierarchy relates to the ease of movement for the various travel modes.

Chapter 12: Socio-Economics

5.132 This chapter will provide an assessment of the socio-economic effects of the proposed development during the construction and operational phases. The assessment will be undertaken by the appointed economic consultant.

Baseline Information

5.133 The site is located on the north-western edge of the town of Pembroke Dock. The site is wholly within the dockyard area, however, only part of the application site is currently in active use. There are some existing employment uses within the application site.

5.134 The town of Pembroke Dock has approximately 10,000 residents (ONS, Census 2011). The wider locality including the town of Pembroke has a population of approximately 17,300 residents (ONS, Census 2011), this equates to 14% of the Pembrokeshire population and 2.5% of the Swansea Bay City Region population. The population of Pembrokeshire rose strongly over the period 2001-11 but has experienced a slower rate of growth between 2011-16 (ONS, Population Mid Year Estimates).

- 5.135 The town of Pembroke Dock is home to 4,360 jobs (ONS, BRES 2016). The wider locality including the town of Pembroke is home to 6,340 jobs (ONS, BRES 2016), this equates to 14% of jobs in Pembrokeshire and 2.3% of jobs in the Swansea Bay City Region. Employment in the locality has been broadly static in recent years in comparison to rising employment across comparator areas (ONS, BRES 2016).
- 5.136 The economic activity rate, employment rate and unemployment rate in Pembrokeshire are similar to the Wales average. However, all compare unfavourably with the Great Britain average (ONS, Annual Population Survey).
- 5.137 Wages earned by working residents of Pembrokeshire are well below Wales and Great Britain averages. This is also true when considering the workplace based measure of earnings. Pembrokeshire earnings are approximately 90% of the Wales average and 80% of the Great Britain average (ONS, Annual Survey of Hours and Earnings).
- 5.138 There is a lower proportion of working age residents with the highest level of qualifications in Pembrokeshire in comparison to Wales and Great Britain (ONS, Annual Population Survey).
- 5.139 The Pembroke and Pembroke Dock area comprises some of the most deprived communities within Pembrokeshire with a number of LSOAs in the 10% most deprived in Wales (Welsh Government, Welsh Index of Multiple Deprivation).

Proposed Approach

Assessment of Effects

- 5.140 The following are considered to be the main areas of potential effects that will be assessed:
- Employment – potential effects on local employment resulting from:
 - construction related jobs generated by the proposed development, potentially available from within the local economy;
 - direct employment changes that may be generated by the operation of the development;
 - indirect employment changes through supply chains; and
 - induced employment changes resulting from changes in the level of expenditure in the local economy, as a result of the proposed development.
 - Wages – generated through direct, indirect and induced employment
 - Gross Value Added (GVA) – a measure of economic output, generated through the activities during both the construction and operational phases.
 - Skills and Innovation – as a result of training activities, research and development activities and the introduction of new technologies and processes.

Scope of Assessment

- 5.141 The number of construction related jobs potentially generated by the development will be established with reference to the overall capital value of the proposed development and the programme of

construction, using best practice assumptions. The percentage of jobs likely to be available within the local economy will depend upon the extent to which the developer is able to put procurement procedures in place to promote local enterprise. Employment effects will be expressed as person years of employment given their temporary nature. Additionality will be assessed in terms of leakage, deadweight, displacement and multiplier effects using best practice assumptions.

- 5.142 Direct employment arising from the operational development will be considered on the basis of the finalised masterplan. This will be based on best practice guidance and consultation with stakeholders as to the likely nature of occupiers. Employment changes will be expressed as full time equivalent permanent jobs.
- 5.143 The impact of the development upon the local economy will be assessed on the basis of an estimate of net changes in employment, anticipated salary and wage levels and GVA per worker. When assessing the economic impact, account will be taken of the 'additionality' of the benefits, by considering in turn the deadweight, leakage, displacement, substitution and multiplier effects within the target group and the target area, using current best practice guidance and project specific information.
- 5.144 The proposed development will have socio economic impacts at different geographic scales. This will include the site, the locality of Pembroke Dock and Pembroke, the county of Pembrokeshire and the Swansea Bay City Region. There are also potential effects across the wider Wales and UK economies. The assessment will need to consider the effects at these different geographical levels.

Chapter 13: Ground Conditions

- 5.145 This chapter will provide an assessment of the ground conditions effects of the proposed development during the construction and operational phases. The assessment will be undertaken by RPS Consulting Services Ltd.

Baseline Information

- 5.146 RPS has carried out a Desk-Top Study and Preliminary Risk Assessment (DTS & PRA) (see **Appendix 1**) including site reconnaissance, which consolidates all the available reports and ground investigation data for the application site that are available at this time. The DTS & PRA should be read in conjunction with this Scoping Report for full details of the baseline conditions.
- 5.147 The remainder of this section presents a summary of the baseline conditions at the site.
- 5.148 The following reports were reviewed as part of the DTS & PRA:
- Port of Pembroke – Culvert Traverse Survey Letter report, by Sewer Services Ltd on behalf of W S Atkins, ref: 417-3/WFR/vjf, dated 24th May 1999,
 - Land Quality Assessment Phase 1: Desk Study, HM Mooring Depot Pembroke Dock, by Enviros Consulting Ltd on behalf of Defence Estates, ref: 12553, dated October 2006,
 - Land Quality Assessment Phase Two: Intrusive Investigation, HM Mooring Depot Pembroke Dock, by Enviros Consulting Ltd on behalf of Defence Estates, ref: 12553, dated April 2007,
 - Ex-RMAS Site, 2020 Condition Survey Report, by Atkins on behalf of Milford Haven Port Authority, ref: 5056549-2/DG01-3, dated December 2008,

- Gate 4 Pickling Pond Culvert System, Preliminary Inspection Report, by Atkins on behalf of Port of Milford Haven, ref: 5116155-008/DG01_Inspection Report, dated 21st June 2013 (this includes and updates a report from 20th September 2010),
- Site within Gate 1 Pembroke Dock Pembrokeshire, Preliminary Risk Assessment, ground conditions and contaminated land, by RSK Environment Ltd on behalf of Port of Milford Haven Limited, ref: 312994-R1(00), Status: Final, dated March 2015,
- Phase I Ground Investigation Interpretative Report, Pembroke Dock Port, by Quantum Geotechnical on behalf of Milford Haven Port Authority, ref: G624/IR, dated April 2015,
- Pembroke Dock Geotechnical Desk Study, by Royal Haskoning DHV on behalf of Milford Haven Port Authority, ref: PB4337R002, rev. 01/Final, dated 13th November 2015,
- UXO Desk Study & Risk Assessment, Pembroke Dockyard by Zetica Ltd on behalf of Royal Haskoning DHV, ref: P5692-15-R1 rev B, dated 7th December 2015,
- Milford & Pembroke Docks, Ground Investigation Factual Report, by Quantum Geotechnical Ltd on behalf of Milford Haven Port Authority, ref: G778/FR, rev 1, dated June 2016, and
- Pembroke Dock Redevelopments, Ground Investigation Report, by Royal Haskoning DHV on behalf of Milford Haven Port Authority, ref: PB4337R007D01, rev. 01/Draft, dated 3rd August 2016.

5.149 The geology of the site is recorded to comprise Made Ground overlying superficial deposits, overlying bedrock of the Pembroke Limestone Group/Black Rock Sub-Group and Gully Oolite Formation (limestone, mudstone and sandstone). Made Ground at the Assessment Site comprised concrete, asphalt, gravel and silt at the ground surface, with cobbles and boulders of concrete and limestone at greater depth. Made Ground is generally present to between 0.5 m and 5.0 m below ground level (bgl). Superficial deposits comprising clay, silt, sand and gravel have been encountered during the previous investigations, typically to around 9.0 m bgl. In some locations, this stratum is present to over 14.5 m, indicating possible solution features within the limestone below. The bedrock has been encountered as limestone and/or mudstone across the site, often with a weathered layer at the top.

5.150 The bedrock geology is classified as a Principal Aquifer, and the superficial geology is a Secondary (undifferentiated) Aquifer. The bedrock geology is classified as Soils of High Leaching Potential (U). It is considered that due to the proximity of the estuary, the groundwater beneath the Assessment Site is likely to be impacted by saline intrusion. Extracted groundwater from this area is therefore unlikely to be suitable for drinking water and subsequently the sensitivity is lower than would otherwise be expected for a Principal Aquifer.

5.151 The Milford Haven Waterway and Estuary SSSI is present to the immediate north of the site. The estuary is the main receptor for potential contamination leaching/migrating from soils and/or groundwater below the site. The presence of extensive hardstanding at the site is considered to limit infiltration of rainwater, although it is in poor condition in places.

5.152 The site is within a higher probability radon area - where 10% to 30% of homes are estimated to be at or above the Action Level.

- 5.153 The proposed development comprises the creation of transport corridors, open-air lay down areas, increased dockside space and buildings for a variety of engineering purposes. New buildings are proposed in the northwest of the site (including infilling of the former Graving Dock), in the southwest (including infilling of the former Timber Pond) and in the Milforge Site. Additionally, an area between Slipway 1 and Slipway 2 will be infilled.
- 5.154 The multiple phases of ground investigation work and assessments undertaken to date, as summarised within the DTS and PRA (**Appendix 1**) have identified a range of potential contamination sources at and adjacent to the site, as set out in the following paragraphs.
- 5.155 The site reconnaissance undertaken as part of the DTS & PRA (annotated plan and photographs are provided within (**Appendix 1**) identified the presence of electrical sub-stations, fuel tanks, demolition rubble and oily sheens on rainwater puddles near the scrap yard. The inspection of desk based records identified the following further potential current contaminating activities/structures: sewage works (immediately off-site) storage of fuel oil, scrap yard, presence of electrical sub-stations and spoil heaps (potential hydrocarbons, PCBs and asbestos contamination). Additionally the following historical potential contaminating activities/structures were identified: localised storage tanks, railway lines, electrical sub-stations, car dealers/breakers, manufacturing/engineering (potential hydrocarbons, solvents, PCBs, heavy metals, ground gas/vapours and asbestos contamination), historical off-site gas works and a depot feature to the south (potential ground gas/vapours to migrate to the site) and chemical contamination of shallow/perched groundwater (potential cyanide, hydrocarbons, solvents, PCBs, heavy metals and vapours).
- 5.156 The available ground investigation and assessments reviewed as part of the DTS and PRA provide a reasonable understanding of the extent and severity of contamination at the site associated with the above potentially contaminating activities. These works have identified low to moderate levels of localised contamination. Whilst the investigation works that have been undertaken provide a reasonable site coverage/density of investigation points, if data is not available for all parts of the site. Whilst some of the available data is relatively old (2006) it is considered that it is likely to have characterised any historical contamination sources and contaminating activities at the site.
- 5.157 The DTS and PRA presents a risk assessment based on a proposed future commercial use of the site. The risk assessment identified a low to moderate risk to controlled waters and human health from contamination and a low to moderate risk from ground gas. The DTS and PRA identifies a low risk of ground instability, other than in respects of solution features, running sands and compressible ground, which have the potential impact the site.

Proposed Approach

Baseline studies

General

- 5.158 As previously stated, the previous reports do not present data for all areas of the site. It is therefore proposed that further targeted intrusive investigation is undertaken, and up to date assessments undertaken in relation to risk to human health, controlled waters and from ground gas (considering both the data from the proposed and previous investigations). Whilst potential presence of running sands, compressible ground and solution features in the limestone bedrock have been identified at the Assessment Site it is considered that specific investigation to characterise these issues can

reasonable be undertaken at detailed design stage and is not proposed as part of this scope of works in support of the Ground Conditions EIA chapter.

- 5.159** The targeted intrusive ground investigation shall comprise a series of boreholes to address the identified data gaps. The proposed boreholes shall be advanced using a combination of windowless sampling techniques (for shallow boreholes) and rotary technique (for deeper boreholes). Where boreholes will advance to depths where a pathway to the Principal Aquifer may be created, clean drilling techniques shall be used.
- 5.160** A drawing detailing the proposed locations of boreholes is provided as **Figure 12** (*Drawing JER1262-SR-001A*). This drawing also details the location of existing monitoring wells from previous phases of ground investigating that will be monitored as part of the proposed ground investigation.
- 5.161** A table setting out the proposed depth of boreholes, target depths for monitoring wells and expected geology in that location is provide at **Appendix 2**.
- 5.162** The scope of investigation has been designed to target the areas where previous investigation data is not available, revisit key areas where ongoing potentially contaminating activities are occurring and provide further confidence regarding the groundwater regime beneath the site and its contamination status. As such the scope of works comprises:
- Advancement of shallow and deep boreholes on the boundaries of the site to allow groundwater sampling from the limestone aquifer and any overlying perched water.
 - Advancement of shallow boreholes in the central parts of the southern area of the site and the eastern parts of the northern area of the site, where historical ground investigation data is unavailable.
 - Targeted investigation in the western part of the site to target the following ongoing potentially contaminating activities:
 - 2 no. electricity substations.
 - 1 no. refuelling point.
 - 1 no scrap yard.
- 5.163** The ground conditions at each location will be logged and representative soil samples will be recovered for subsequent laboratory analysis. Following the main phase of intrusive ground investigation works 1 no. groundwater and 2 no. gas monitoring rounds will be undertaken to allow monitoring of gas concentrations and flow rates and groundwater levels. During the groundwater monitoring round groundwater samples will be recovered for subsequent laboratory analysis.

Reporting and Assessment

- 5.164** A factual and interpretative ground investigation report shall be provided that will detail the works undertaken and the ground, groundwater and gas conditions encountered. The report will present a Conceptual Site Model (CSM) identifying the contamination sources, pathways and receptors. Screening level assessments will be undertaken in relation to risk to human health and controlled waters and the risk from ground gas. These assessments will utilise the data from the current and

historical phases of intrusive ground investigation. A qualitative geotechnical appraisal will be undertaken considering ground stability issues which could significantly impact the development.

Assessment of Effects

5.165 The assessment of the likely effects shall comprise:

- Identification of ground conditions and hydrogeology receptors that could be affected by the proposed development, together with a description of the significance of the receptor.
- Identification of the likely effects on the identified receptors.
- Assessment of the significance of the effects on the receptors taking account of the measures proposed to avoid, reduce and offset adverse effects.

5.166 The assessment will be in the form of a matrix based approach which considers the sensitivity of the receptor, magnitude of impact to the receptor and the resulting significance of effect.

Scope of the Assessment

5.167 The assessment shall consider the following:

- Impacts associated with ground and groundwater contamination to surface water, groundwater, human health and buildings.
- Impacts from ground gas to buildings and their occupants.
- Impacts associated with physical alteration of the groundwater regime beneath the Assessment Site.
- Impact to structures and their occupants from ground stability issues.

Issues Proposed to be Scoped Out

5.168 The risk from unexploded ordnance (UXO) is not considered as part of this assessment as the previous assessments have concluded a low level of UXO risk.

5.169 The impact of contamination on marine sediments is not considered within this chapter.

5.170 The intrusive ground investigation works proposed in support of this chapter are not designed to establish the presence or absence of solution features. This will be defined through intrusive ground investigation works and or geophysical surveys in support of detailed design of each of the proposed structures. This chapter will identify, as mitigation, the scope of further intrusive ground investigation works and or geophysical surveys considered necessary to constrain this issue and allow detailed design.

Chapter 14: Landscape and Visual Impact

5.171 This chapter will provide an assessment of landscape and visual effects of the proposed development during the construction and operational phases. The assessment will be undertaken by RPS Consulting Services Ltd.

Baseline Information

- 5.172 Pembroke Port lies outside the Pembrokeshire Area of Outstanding Natural Beauty (AONB), which is located approximately 3km to the east and approximately 3.5km to the west. The Port is however within the Pembroke Dock Conservation Area and the Milford Haven Waterway Landscape of Outstanding Historic Interest ('LOHI').
- 5.173 A tree survey has already been undertaken on the site. This has identified several Category A and B trees, mainly located along the south of the site. These will be retained wherever possible.

Proposed Approach

Baseline Studies

- 5.174 Baseline data will be compiled via a combination of desktop study and onsite survey work, which will identify the key landscape features within and adjacent to the site boundary that form the landscape character and landscape baseline. The site work will also identify the visual baseline through location and analysis of the key public viewpoints and the likely effect of the proposed development of each view identified.

Assessment of Effects

- 5.175 Milford Haven Waterway is already the UK's largest energy port with a wide range of marine and other energy related facilities located within it. Consequently, large scale industrial buildings are already a very common element within both the wider landscape character and context of the Waterway. This is also the case with the Pembroke Port, which historically contained a range of large scale industrial marine related buildings, some of which are still present on the site. The proposed buildings would be nestled within the existing built development and are likely to be seen as part of the collective built development of the working docks and the surrounding area.
- 5.176 Whilst Pembroke Port lies outside the Pembrokeshire AONB, there are views from sections of the Wales Coastal Path that may be affected.

Scope of the Assessment

- 5.177 The LVIA would be prepared using a methodology referring to the following documents:
- 'Guidelines for Landscape and Visual Impact Assessment - Third Edition' (GLVIA3) (Landscape Institute and Institute of Environmental Management and Assessment, 2013);
 - LANDMAP methodology;
 - 'Guide to best Practice in Seascape Assessment' (Countryside Council for Wales, Brady Shipman and Martin, University College Dublin, 2001) Maritime Ireland/Wales INTERREG Report No. 5;
 - 'An Approach to Seascape Character Assessment' (Natural England, 2012);
- 5.178 Consultation with the PCC Landscape Officer will be undertaken to establish and agree up to 10 land-based public viewpoints.
- 5.179 Whilst Pembroke Port lies outside the Pembrokeshire AONB, here are views from sections of the Pembrokeshire West Wales long distance public right of way that may be affected. As indicated

above, baseline analysis work to identify existing landscape character of the site and adjacent landscape, seascape and its sensitivity to change will be undertaken.

5.180 A site visit will be undertaken to identify the main public viewpoints and to identify baseline conditions, including reference to topography, existing vegetation, roads and built development. The visual context of the site would be established, including the extent of views from:

- Promoted public rights of way, such as Wales Coastal Path
- Noted viewing points, such as from the Cleddau Bridge, across the Daugleddau and other publicly accessible coastal viewpoints;
- Publicly accessible heritage assets, such as the Defensible Barracks on Barracks Hill;
- Private residential properties with views of the proposed new buildings;
- Public locations within the town and villages across the Daugleddau that have views of the proposed buildings;
- The extent of views from close receptors travelling along roads, such as the A4139, the A477, the B4322, Victoria Road and St Patrick's Hill.
- Commercial properties or concerns close to or overlooking the proposed development; and
- Public buildings, such as churches, village halls, schools and hospitals.

5.181 The assessment of the effect of the proposed development would be in terms of impact on the existing landscape and seascape resources and character, including an assessment of whether the proposed development would affect the AONB designation, as well as considering the visual impact on existing views of identified and representative visual receptors, during the daytime and at night, during construction and operation. It will also include consideration of any relevant cumulative effects. The assessment will take into consideration the sensitivity of the landscape resources, visual receptors and the nature and magnitude of change to determine any significant effects.

Issues Proposed to be Scoped Out

5.182 No sea-based view-points are proposed.

Chapter 15: Flooding and Hydrology

5.183 This chapter will provide an assessment of flooding and hydrology effects of the proposed development during the construction and operational phases. The assessment will be undertaken by RPS Consulting Services Ltd.

Baseline Information

5.184 The majority the site lies entirely within Flood Zones A/1 and is therefore identified as land having a less than 1 in 1,000 annual probability of river or sea flooding. The main source of flooding is associated with the tidally dominated Milford Haven Waterway. Fluvial flooding is not considered a risk at this site.

5.185 No formal flood defences are recorded within the immediate vicinity of the site.

- 5.186 Surface water flood risk to the majority of the site is defined as 'very low' with less than a 1 in 1000 (0.1%) chance of flooding each year. A few localised areas within the central area of the site are defined as being at medium risk, between 1 in 100 (1%) and 1 in 30 (3.3%) chance of flooding.
- 5.187 Publicly available online NRW and Welsh Government records indicate that the site has not been subject to historical flooding.
- 5.188 Notwithstanding the above the proposed development is located immediate adjacent to Milford Haven which is designated a Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC).

Proposed Approach

Baseline Studies

- 5.189 A detailed baseline study will be undertaken to establish the current conditions of the water environment. Information will be drawn from a variety of sources and will likely include:
- British Geological Survey (BGS) 1:50,000 geological mapping;
 - BGS Geindex Onshore (Online);
 - BGS Aquifer Designation Maps;
 - Lavernock Point to St. Ann's Head Shoreline Management Plan SMP2 (January 2012);
 - Met Office: Climate data (2016) (www.metoffice.gov.uk);
 - Natural Resource Wales, Cleddau and Pembrokeshire Coastal Rivers Management Catchment Summary.
 - Natural Resource Wales, Western Wales Flood Risk Management Plan;
 - Ordnance Survey (OS) Landranger 1:50,000 Sheet 157: St David's & Haverfordwest;
 - The Centre for Ecology and Hydrology (CEH) (2012) (www.ceh.ac.uk); and
 - Welsh Government and Natural Resources Wales, Lle Geo-Porta (April 2018).
 - Site-specific hydrological data will be obtained via consultation with the NRW, Lead Local Flood Authority, Welsh Water, from commercial data suppliers, and site reconnaissance.

Assessment of Effects

- 5.190 In accordance with the general approach to EIA identified in Section 3 of this report the proposed development has the potential to lead to environmental effects on the water environment. At this stage it is not possible to determine whether potential effects on the hydrology and flood baseline are likely to be significant particularly given the site proximity to designated sites, and therefore on a precautionary basis they are proposed to be included within the EIA scope. The following are considered to be the main areas of potential effects that will be assessed:
- Potential effects on surface water quality during and post construction

- Potential effects on surface water run-off and flood risk;
- Potential effects on coastal water quality during construction and operation;
- Potential effects on groundwater quality during construction; and
- Potential effects on groundwater resources during operation.

The effects of climate change related sea and river level rise over the lifespan of the development will be included in the flood risk assessment on a precautionary basis to assess the vulnerability and resilience of the development to climate change over its 20 year lifespan, in line with NRW guidance climate change, August 2016 (<http://gov.wales/topics/planning/policy/policyclarificationletters/2016/cl-03-16-climate-change-allowances-for-planning-purposes/?lang=en>).

Scope of the Assessment

- 5.191** The baseline characterisation set out above enables the identification of the nature and likely significance of effects. The assessment considers the potential impacts to environmental receptors and the pathways by which the receptors may be affected. The following terms have the following meanings in this section.
- Source: waterbody, potential contaminant sources, ground/channel disturbance;
 - Pathway: the mechanism by which the source may affect a receptor; and
 - Receptor: identified features that may be affected, based on the sensitivity of the site.
- 5.192** This includes consideration of the probability of harm occurring, taking into account potential sources of flooding and receptors that may be affected.
- 5.193** The significance of predicted effects likely to occur during each phase of the proposed development will be determined by consideration of the sensitivity of the key attributes of the hydrological environment and flood risk that may be affected and the magnitude of the predicted effect.
- 5.194** This will be based on combining assessments of both the likelihood and consequence of any potential impact in line with IEMA guidance. This approach embraces the principles of the WFD.
- 5.195** The evaluation of the significance of potential effects on the water environment will be in accordance with the EIA methodology set out in Chapter 3 of this report. Criteria such as the NRW's water quality ratings and ecological designations will be drawn upon in order to define the sensitivity of the water environment.
- 5.196** Flood risk will be assessed in line with the PPW9 (November 2016) and the associated Technical Advice Note 15 (TAN15) as well as relevant local planning policy, as appropriate. The assessment will include a desk study of maps and published information, consultation with NRW and local water authorities, and a walkover survey.
- 5.197** A Flood Consequence Assessment (FCA) will be prepared, to take into account the effect that increasing the area of hard standing may have on the surface water run-off regime. This will look at the vulnerability to flooding from other sources as well as from river and sea flooding and the potential to increase flooding risk elsewhere.

Sensitivity of Receptors

- 5.198 The sensitivity or value of a hydrological receptor or attribute is largely determined by its quality, rarity and scale.
- 5.199 The definitions set out in **Table 10** below will be followed in the consideration of sensitivity. The definitions take into account guidance provided in Table 2.1 A4.3 of the Design Manual for Roads and Bridges (DMRB) (Highways Agency et al., 2009) and the author's professional judgement. The table also takes due consideration of the Water Framework Directive (Directive 2000/60/EC of the European Parliament and of the Council of 23, October 2000).

Table 10: Definition of Terms relating to the Sensitivity of Receptors

Sensitivity	Definition
Negligible	Receptor is of negligible value with no contribution to local, regional or national economy. Receptor is not vulnerable to impacts that may arise from the project and/or has high recoverability. Surface water: WFD Current Overall Status of Bad. Flood risk: Area outside flood plain or flood plain with very low probability of flooding industrial properties.
Low	Receptor is of low value with little contribution to local, regional or national economy. Receptor is not generally vulnerable to impacts that may arise from the project and/or has high recoverability. Surface water: WFD Current Overall Status of Poor. Flood risk: Flood plain with limited constraints and a low probability of flooding of residential and industrial properties.
Medium	Receptor is of minor value with small levels of contribution to local, regional or national economy. Receptor is somewhat vulnerable to impacts that may arise from the project and has moderate to high levels of recoverability. Surface water: WFD Current Overall Status of Moderate. Flood risk: Flood plain with limited constraints and a low probability of flooding of residential and industrial properties.
High	Receptor is of moderate value with reasonable contribution to local, regional or national economy. Receptor is generally vulnerable to impacts that may arise from the project and recoverability is slow and/or costly. Surface water: WFD Current Overall Status of Good. Flood risk: Flood plain or defence protecting between one and one hundred residential properties or industrial premises from flooding.
Very high	Receptor is high value or critical importance to local, regional or national economy. Receptor is highly vulnerable to impacts that may arise from the project and recoverability is long term or not possible. Surface water: WFD Current Overall Status of High. Flood risk: Flood plain or defence protecting more than one hundred residential properties from flooding.

Magnitude of Effects

- 5.200 The magnitude of any predicted effect is dependent on its size, duration, timing (e.g., seasonality) and frequency (permanent, seasonal etc.). A qualitative appraisal of the likely magnitude of the predicted effect will be provided within the assessment, considering the measures proposed to be adopted as part of the development to control such effects. The magnitude of the predicted effect will be described

using the criteria outlined in **Table 11** below. This table considers guidance provided in Table 2.1, A4.4 of DMRB (Highways Agency et al., 2009) and the author's professional judgement.

Table 11: Definition of Terms relating to the Magnitude of an Effect upon Receptors

Sensitivity	Definition
No change	No change from baseline conditions.
Negligible	Very slight change from baseline condition. Physical extent of effect is negligible and of short term duration (i.e., less than two years).
Low	Minor shift away from baseline, leading to a reduction in level of activity that may be undertaken. Effect is of limited temporal or physical extent and of short term duration (i.e., less than two years).
Medium	Loss or alteration to significant portions of key components of current activity. Effect is of moderate temporal or physical extent and of medium term duration (i.e., less than 20 years).
High	Total loss of ability to carry on activities. Effect is of extended temporal or physical extent and of long term duration (i.e., approximately 50 years duration).

5.201 Magnitude must consider duration. The following definitions will be used in inform the assessment:

- Short term: A period of months, up to one year;
- Medium term: A period of more than one year, up to five years;
- Long term: A period of greater than five years.

Significance of Effects

5.202 The significance of predicted effects will be determined using publicly available environmental data to consider the sensitivity of the receptor and the magnitude of each effect using as matrix as explained in Chapter 3 of this report.

Chapter 16: Biodiversity

5.203 This chapter will provide an assessment of biodiversity (terrestrial) effects of the proposed development during the construction and operational phases. The assessment will be undertaken by RPS Consulting Services Ltd.

Baseline Information

5.204 The following biodiversity studies have been undertaken at the site:

- Preliminary Ecology Appraisal (RSK May 2017);
- Botanical Report with regard to Open Mosaic Habitat (RSK January 2018);

- Reptile Survey Report (RSK November 2017);
- Interim Nocturnal Bat Survey Report (RSK November 2017);
- Preliminary Bat Roost Assessment (RSK July 2017);
- Badger Sett Monitoring Report (RSK November 2017).

5.205 The dock primarily comprises hardstanding and industrial buildings, with smaller sections of vegetated habitat at the south of the site. The Preliminary Ecological Appraisal (PEA) identified localised areas of open mosaic habitat as having highest importance for biodiversity in the context of the site, supporting areas of botanically diverse vegetation. There is also a small block of secondary woodland on the southern boundary.

5.206 The Schedule 9 invasive species Japanese knotweed has been recorded in two locations towards the boundary of the site.

5.207 Brown long-eared bat and common pipistrelle roosts were confirmed in a small number of the on-site dock buildings during the 2017 surveys. Evidence of potential lesser horseshoe and soprano pipistrelle roosts were also recorded. Greater horseshoe are known to roost in buildings adjacent but outside of the site boundary. There are no known bat roosts in the few mature trees with cavities in the southern part of the site.

5.208 Otters are likely to use the marine habitat adjoining the docks but there are minimal areas of shelter or cover associated with the development site which is considered unsuitable for holts or couches. The mudflats adjoining the dockland to the north are part of very extensive intertidal habitat used by wintering waders.

5.209 An active badger outlier sett was recorded within the small block of woodland on the southern boundary. Closure of the sett is likely to be required as part of the development.

Proposed Approach

5.210 The Ecology ES Chapter will follow the most recent published guidance for undertaking Ecological Impact Assessment (EclA) published by the Chartered Institute of Ecology and Environmental Management (CIEEM). This approach originally published in 2006 uses a defined geographic scale (international, national, county, local, site) to assess value and impacts to enable judgements on biodiversity change and consistency with Technical Advice Note 5: Nature Conservation and Planning and the Environment Act (Wales) 2016.

Baseline Studies

5.211 The Ecological Impact Assessment (EclA) would be prepared using the methodology referred to in 'Guidelines for Ecological Impact Assessment - Third Edition' (Chartered Institute of Ecology and Environmental Management, 2016).

5.212 The EclA will:

- Identify the baseline conditions and ecological features, and take account of potential changes in condition between the time of the assessment and the commencement of the development;

- Identify the ecological features likely to be affected by the development, including any site's designated for their nature conservation or biodiversity value;
- Evaluate the ecological/biodiversity importance of ecological features at the geographical scale;
- Identify the effects on important ecological features as a result of enabling/construction and following occupation of the development;
- Assess the anticipated impact of the identified effects of the development on important ecological features in the absence of additional mitigation measures;
- Define the agreed proposals to avoid, mitigate, compensate or off-set anticipated impacts in addition to those incorporated into the site masterplan; and
- Evaluate the residual impacts in the context of all incorporated and proposed avoidance, mitigation and compensation measures.

5.213 The assessment of the value of the value of habitats or species populations will be based on a range of factors that influence overall ecological value, including; fragility, rarity, extent, diversity, position in the landscape, naturalness, and recorded history, known as the 'Ratcliffe Criteria'. Legal protection of species will be considered in the impact assessment process but is not a primary consideration in determining conservation value.

5.214 Other resources that are used to inform the assessment of value and importance include but are not limited to:

- Statutory and non-statutory designations and all qualifying features
- Habitats of Principal Importance - S7 of the Environment Act (Wales) 2016
- Species of Principal Importance - S7 of the Environment Act (Wales) 2016
- Birds of Conservation Concern (BoCC) Red and Amber lists
- National and County Red Data Book species.

Assessment of Effects

5.215 The resources used to assess the value and importance of features also helps to define the importance in the context of geographical scale. The CIEEM guidelines state that significance of effects of ecological features should be qualified with reference to the appropriate geographic scale. Therefore, the following geographic scales provide a framework that is consistent for both assessing the importance of ecological features and, determining the significance of effects.

5.216 Impacts will be assessed in the context of the baseline, taking into account any anticipated changes in the baseline that may occur prior to commencement. Impacts may be described in terms of changes to the structure or function of ecological resource and are characterised according to a number of parameters where these are relevant to understanding ecological effect. These parameters include:

- Beneficial or adverse – impacts may be either depending on the nature of the impact;
- Extent – the geographical range over which the impact occurs;

- Magnitude – the size of the impact in terms of amount of a feature affected;
- Duration and timing – when the effect will occur and how long it will last;
- Frequency – whether the effect will be a single event or multiple events; and,
- Reversibility – the effect may be permanent, or may naturally reverse without mitigation, or may be reversible with appropriate mitigation.

5.217 A subjective judgement of significance is made based on the interaction between the importance of the ecological feature (at the geographical scale) and the characterisation of the impacts.

5.218 Broadly, an effect is considered significant where they affect the structure of sites, habitats and ecosystems or the conservation status of habitats and species at a defined geographic scale. This approach acknowledges low magnitude adverse and positive impacts on biodiversity in order to define biodiversity change.

5.219 Several impacts of varying magnitudes can act on an ecological receptor simultaneously. Therefore, for each receptor, a single overall level of significance will be presented based on the most significant impact identified for that receptor.

5.220 Measures would be proposed for scheme design, mitigation and compensation to provide options to deliver no net loss and where practical a net benefit for biodiversity conservation (TAN 5).

Scope of the Assessment

5.221 The redevelopment of the site is likely to result in the loss of open mosaic habitat (a Habitat of Principal Importance). Scheme design will look to retain existing habitat where practical, and provide new habitat as compensation where loss cannot be avoided. The loss of lower value habitats is likely in the context of the development proposal and will be considered in the delivery of a positive biodiversity change in the final scheme.

5.222 Common bird species are known to nest on-site and the ES chapter will define the anticipated scale of impact and the precautionary working methods and mitigation that should be implemented for species protection.

5.223 The proposed development is anticipated to have direct effects on a small number of bat roosts with the demolition of existing buildings. All potential loss of bat roosts will be assessed in the ES chapter along with the mitigation measures that would be required to obtain a European Protected Species licence. Potential change in the use of the site and boundary by foraging bats will be considered in the assessment with reference to survey results, existing habitat connectivity, final site design and artificial lighting.

5.224 The ES chapter will also assess the potential for impacts on the level and nature of otter activity along the coastline and on use of intertidal habitat by wintering birds.

5.225 The potential for Japanese knotweed to be spread within the site will also be considered along with the associated precautionary measures.

Issues to be Scoped Out

- 5.226** An application is to be submitted to NRW close the badger sett in the southern part of the site in the near future. However, it is possible that NRW would not grant a licence until outline planning permission is in place. In order to be robust the ES will recognise that the sett will be lost but that this loss of a single outlier sett, due to the low conservation status of badgers, would not be likely to be an impact of ecological significance. No reptile species were recorded in the areas of grassland and scrub during the survey undertaken in 2017 and it has been concluded that there are no reptile populations that would be affected by the development.

Cumulative Effects

- 5.227** As set out in Chapter 3 of this report, no specific developments within the planning system or allocations in the development plan have been identified that should be considered cumulatively with the proposed development.
- 5.228** If PCC identifies any such development(s) that it considers should be assessed cumulatively then each topic chapter will consider the potential for significant cumulative effects with that proposed development(s).

6 SCOPING SUMMARY

- 6.1 This Scoping Report has been prepared by RPS on behalf of MHPA. It proposes the scope of EIA for the Pembroke Dock Marine project which seeks to improve existing facilities at Pembroke Port, Pembroke Dock, Pembrokeshire SA72 6TD
- 6.2 Pembroke Dock Marine will create a flexible port-related industrial area capable of meeting the needs of the modern blue economy and will be the subject of an outline planning application for the erection of buildings, extension to the slipway and associated development at the port, as well as a Marine Licence application to the Natural Resources Wales Marine Licensing Team (NRW-MLT).
- 6.3 This report sets out the proposed scope of the ES and **Table 12** below provides a summary of the issues proposed to be scoped out, in accordance with the EIA Regulations.

Table 12: Summary of Issues Proposed to be Scoped Out

Chapter Title	Scoped Out
Chapter 6: Marine Ecology	<ul style="list-style-type: none"> • Features of the Pembrokeshire Marine SAC: Large shallow inlets and bays, Sandbanks which are slightly covered by sea water all the time, Coastal lagoons, Atlantic salt meadows, Submerged or partially submerged sea caves and Shore dock. • Features of the Cleddau Rivers SAC: Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation, Active raised bogs, Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>, Bullhead and Brook lamprey.
	<ul style="list-style-type: none"> •
Chapter 8: Noise and Vibration	<ul style="list-style-type: none"> • Operational vibration effects from activities on the site: These are likely to be well below any thresholds that would normally require assessment for offsite receptors.
Chapter 10: Historic Environment	<ul style="list-style-type: none"> • Archaeological fieldwork: Adequate records exist for the establishment of an accurate baseline position and an assessment of impacts and effects and any such fieldwork would have to take place within a working dockyard and would give rise to issues of health and safety as well as security.
Chapter 13: Ground Conditions	<ul style="list-style-type: none"> • The risk from unexploded ordnance (UXO): Previous assessments have concluded a low level of UXO risk.
Chapter 14: Landscape and Visual Impact	<ul style="list-style-type: none"> • No sea-based view-points are proposed to be used.

Chapter Title	Scoped Out
Chapter 16: Biodiversity	<ul style="list-style-type: none"> • The badger sett in the southern part of the site is likely to be closed in the near future and the ES will not therefore assess the impact of sett closure in the context of biodiversity importance. • No reptile species were recorded in the areas of grassland and scrub during the survey undertaken in 2017 and it has been concluded that there are no reptile populations that would be affected by the development.
Commercial Fisheries	<ul style="list-style-type: none"> • Commercial and Recreational Fisheries: Within Milford Haven there is limited commercial fishing activity and there is no activity in the vicinity of Pembroke Port.
Shipping and Navigation	<ul style="list-style-type: none"> • Shipping and Navigation: MHPA is responsible for all navigation within Milford Haven.
Climate Change	<ul style="list-style-type: none"> • No separate chapter is proposed: The proposed development will facilitate the development and advancement of marine renewable energy technologies and devices that would reduce reliance on fossil fuels, in turn reducing the emission of GHGs in response to the threat of climate change. A sub-section on climate change will be included within the flooding and hydrology ES chapter, which would be relevant and proportionate to the development proposed.
Population and Human Health	<ul style="list-style-type: none"> • No separate chapter is proposed: Population and human health has a broad scope and is in practice considered across a range of other topic areas within the ES, in particular socio-economic, noise and vibration, air quality, ground conditions and landscape and visual. These topics are proposed to be included within the ES. Therefore, no separate consideration of population and human health is proposed.
Material Assets	<ul style="list-style-type: none"> • No separate chapter is proposed: Material assets are considered across a range of topic areas within the ES, in particular the socio-economic and historic environment chapters. These topics are proposed to be included within the ES. Therefore, no separate consideration of material assets is proposed.

6.4 This report is considered to provide sufficient information to the LPA to enable a Scoping Opinion to be made under Regulation 15 of the EIA Regulations. A letter to the LPA requesting such an opinion accompanies this report.

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

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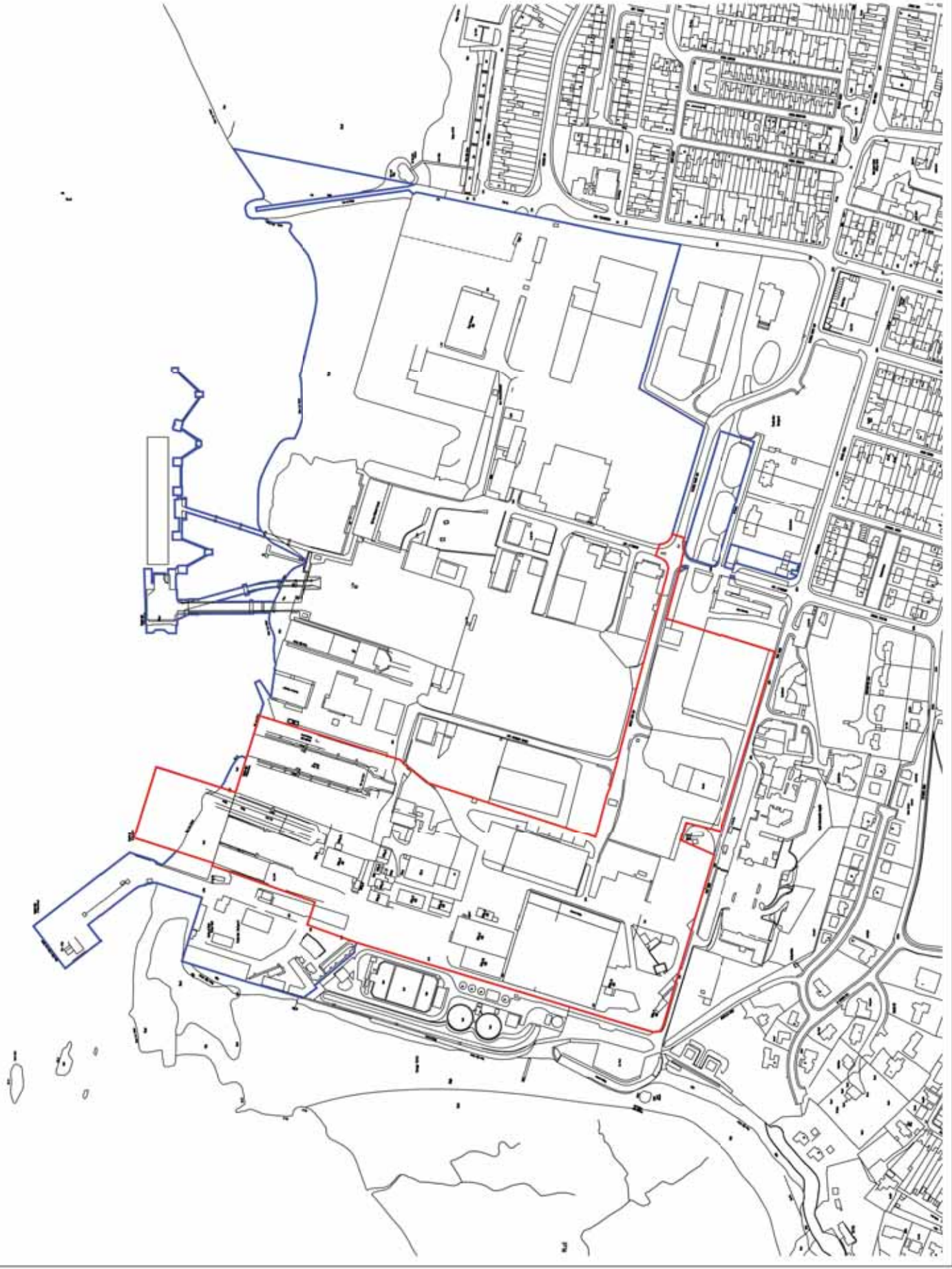
FIGURES

FIGURE 1: SITE LOCATION PLAN (JPW1115-001)

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Project	Pembroke Dock Marine
Title	Site Location Plan

Status	Drawn By	Prepared By
Job Ref	AM	JD
JPW1115	Scale 1:250	Date Created
		Feb 18

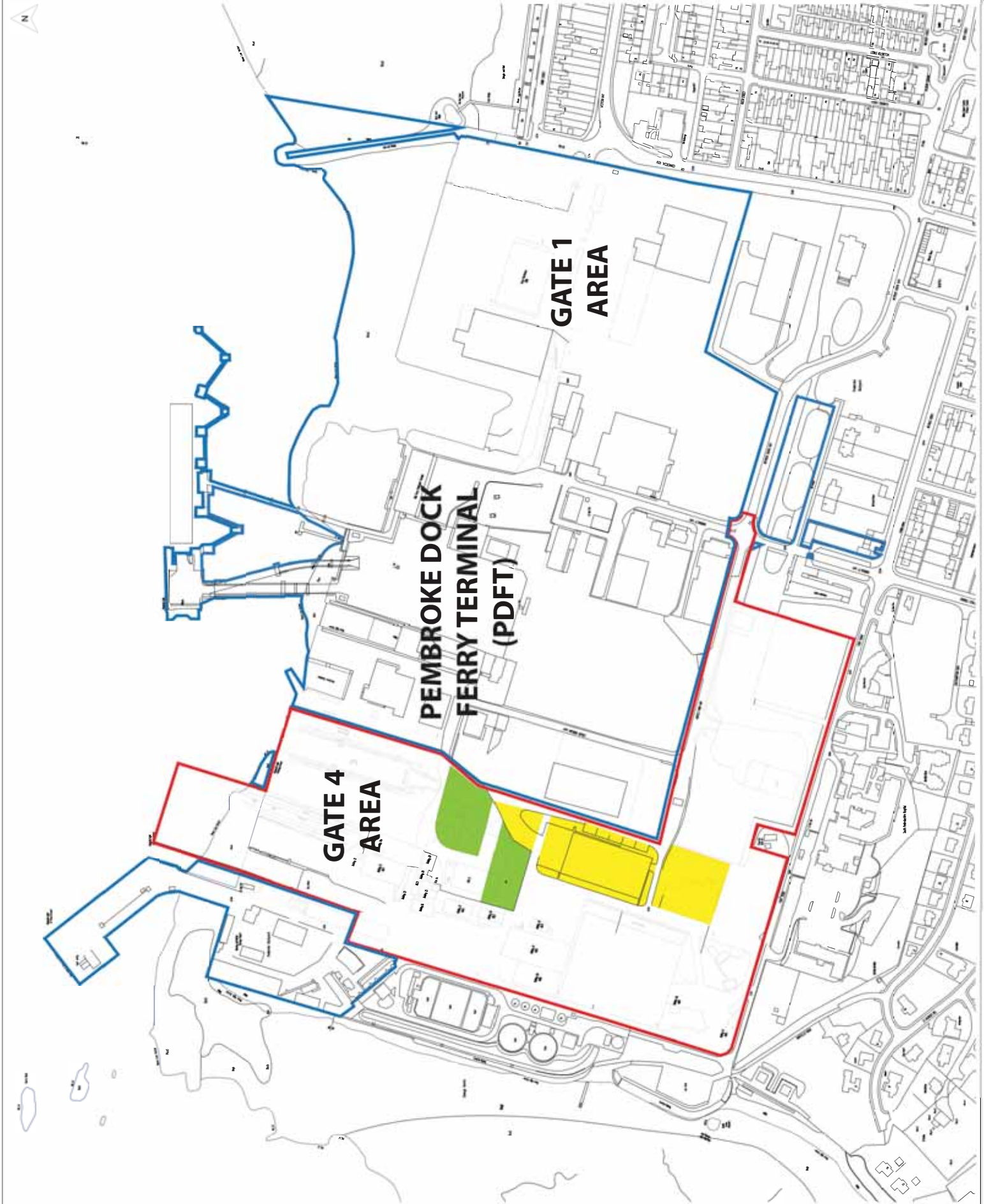
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FIGURE 2: EXISTING SITE PLAN (JPW1115-02 REV E)

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- Application boundary
10.70 ha (26.44 acres)
- Milford Haven Port Authority
other land ownership
23.24 Ha (57.42 acres)
- Land not in MHPA ownership
- Land leased to PCC



Rev	Description	Date	Issue	Checked



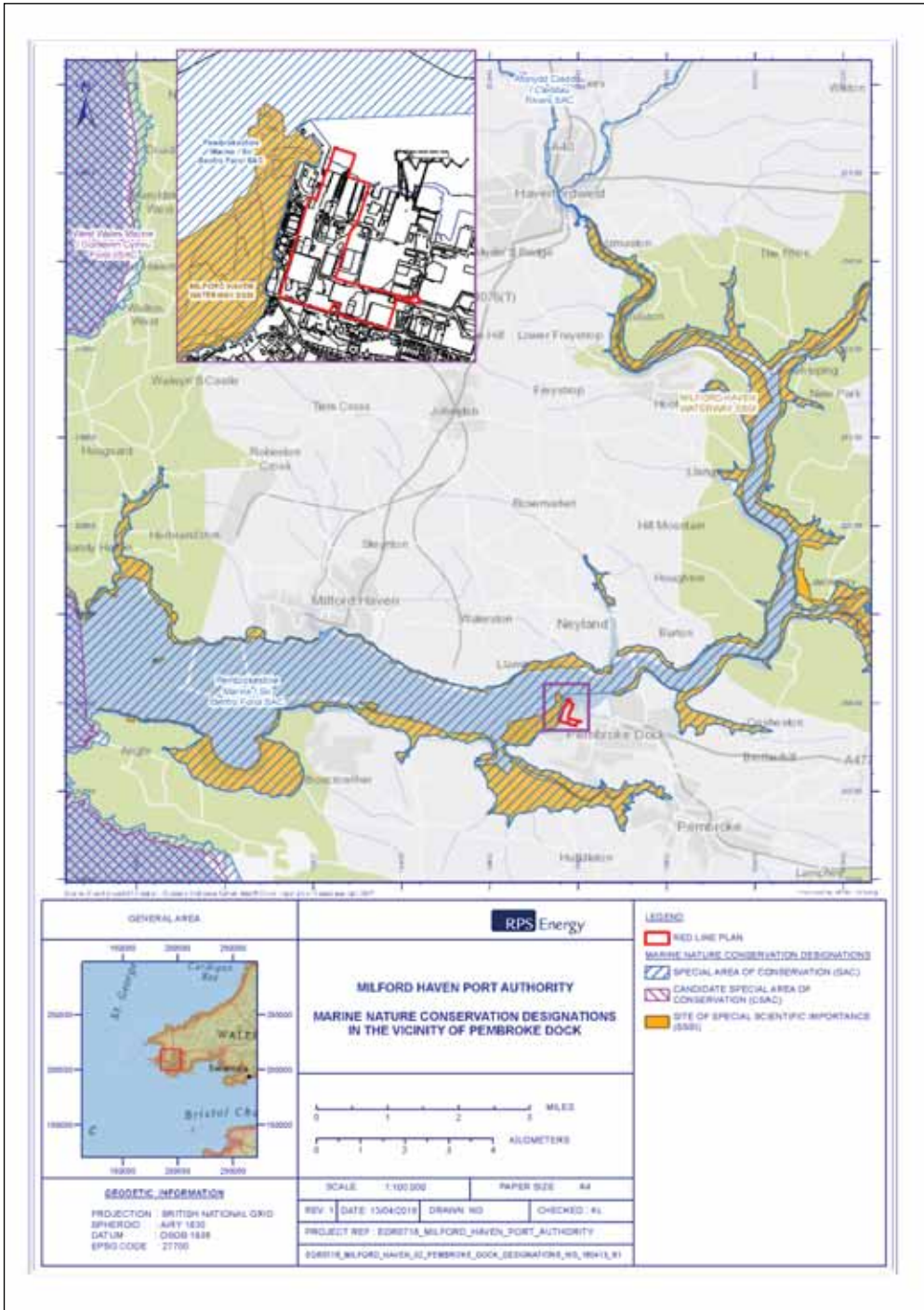
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Client	Milford Haven Port Authority
Project	Pembroke Dock Marine
Title	Existing Site Plan
Status	Draft
Drawn By	AW/PC
Checked By	OW
Job Ref	JPW115
Scale	@ A1
Date Created	Jan 2018
Rev	E
Drawing Number	JPW115-02

**FIGURE 3: DRAFT PROPOSED MASTERPLAN (JPW1115-03
REV H)**

FIGURE 4: MARINE NATURE CONSERVATION DESIGNATIONS IN THE VICINITY OF PEMBROKE PORT

Marine Nature Conservation Designations in the Vicinity of Pembroke Port

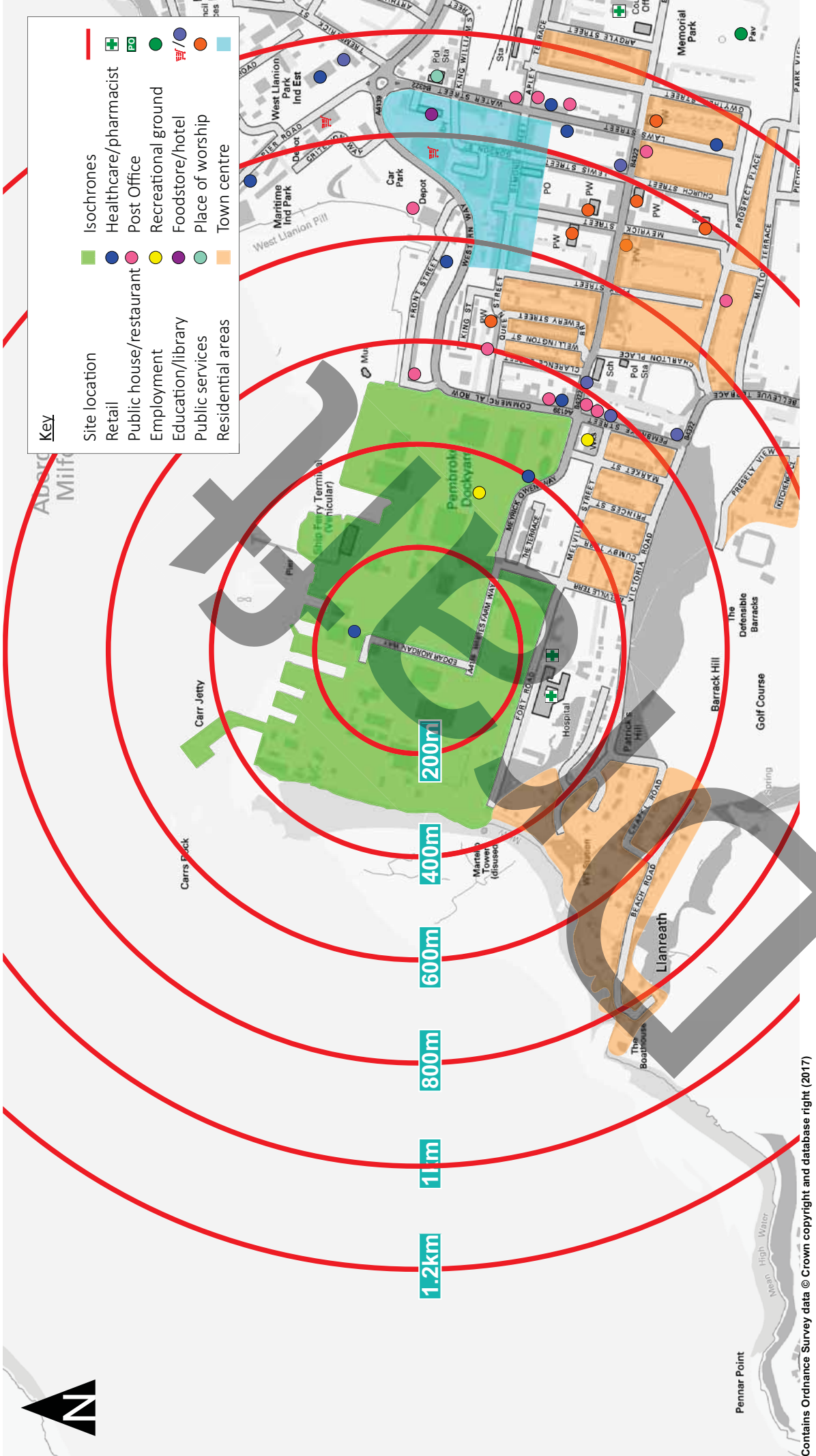


**FIGURE 5: AERIAL IMAGE SHOWING AREAS FOR PROPOSED
NOISE MONITORING LOCATIONS**



Figure 1 – Aerial Image Showing Areas for Proposed Noise Monitoring Locations

**FIGURE 6: ISOCHRONES SHOWING LOCAL AMENITIES WITH
WALKING DISTANCE OF THE SITE**



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Figure	1.4

Pembroke Port, Pembroke

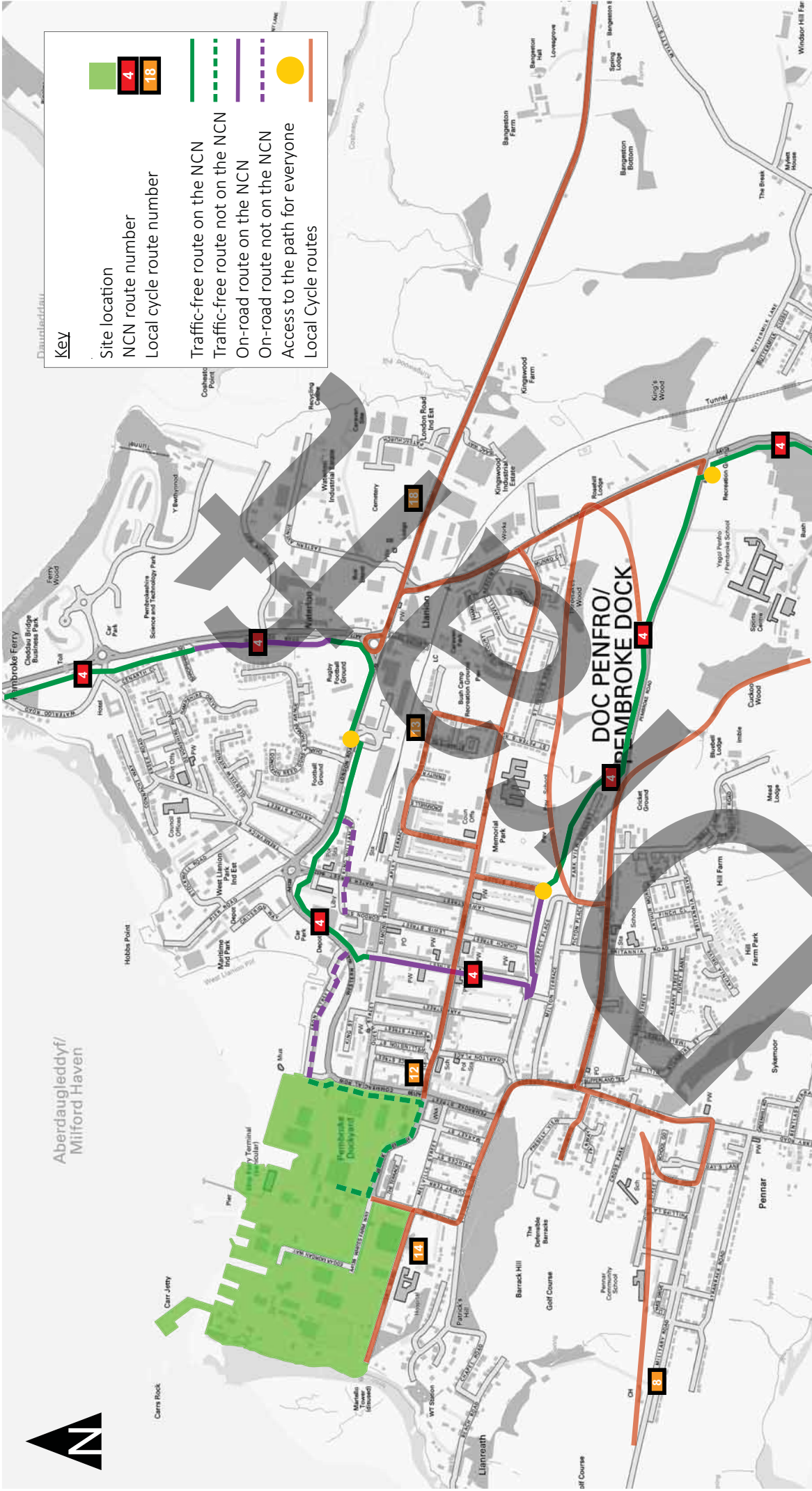
Local Amenities



FIGURE 7: LOCAL CYCLE INFRASTRUCTURE



Aberdaugleddyf/
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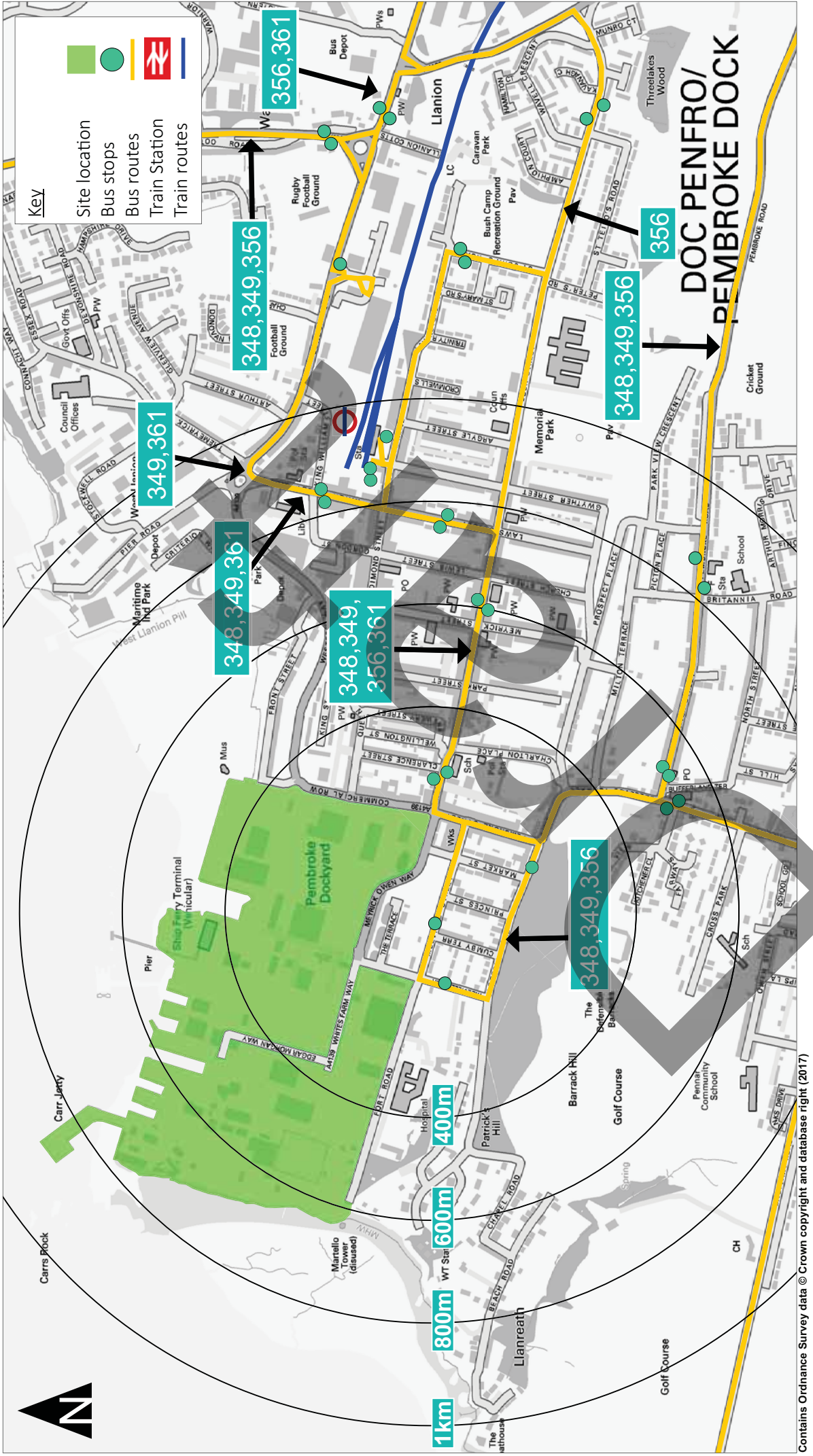
Figure 1.5

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Cycle Infrastructure



FIGURE 8: LOCATION OF BUS STOPS



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Public Transport





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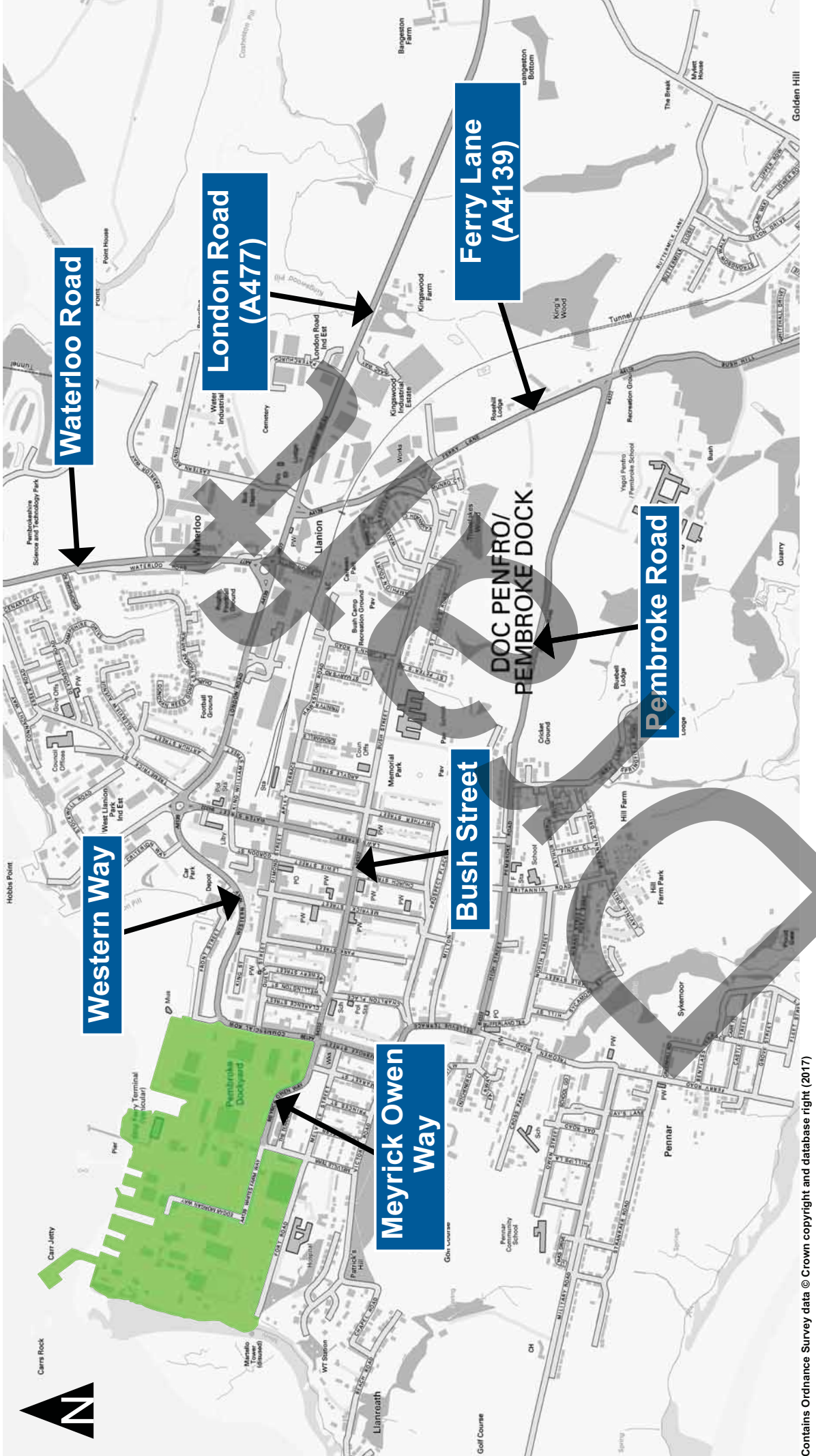


Pembroke Port, Pembroke

Proposed delivery route

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Figure	1.3

FIGURE 9: LOCAL HIGHWAY NETWORK



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Pembroke Port, Pembroke
Local Highway Network





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Pembroke Port, Pembroke

Junction locations



FIGURE 10: LOCATION OF ACCIDENTS



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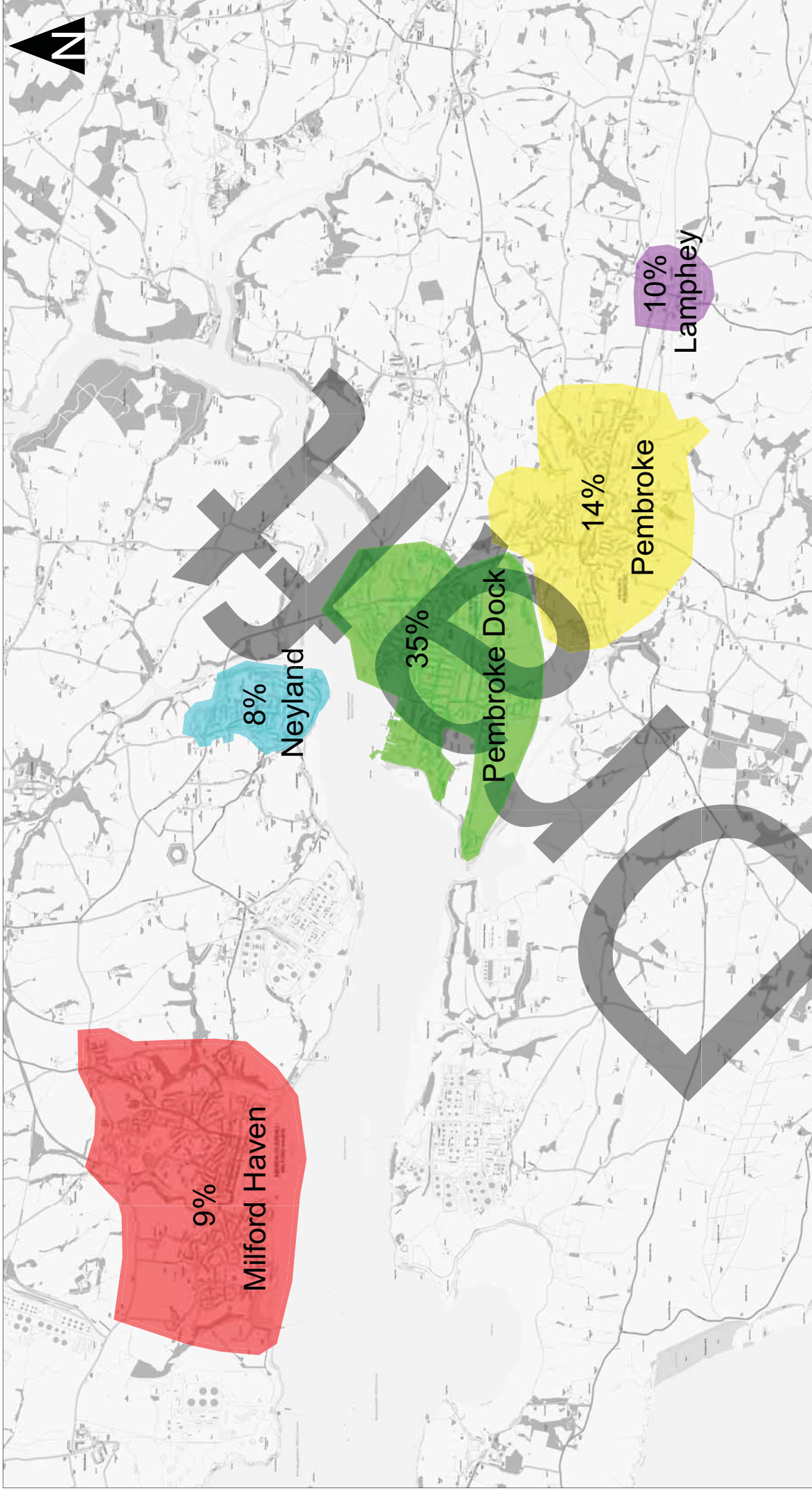
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Figure	1.8

Pembroke Port, Pembroke

Personal Injury Accident Data



**FIGURE 11: PERCENTAGE DISTRIBUTION OF STAFF
WORKING AT PEMBROKE PORT**



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Project no. 17204

Prepared by CDB

Checked by ABR

Date January 2018

Scale NTS

Figure 1.2

Pembroke Port, Pembroke

Percentages by area for travel to work

**FIGURE 12: PROPOSED LOCATIONS OF BOREHOLES
(DRAWING JER1262-SR-001)**

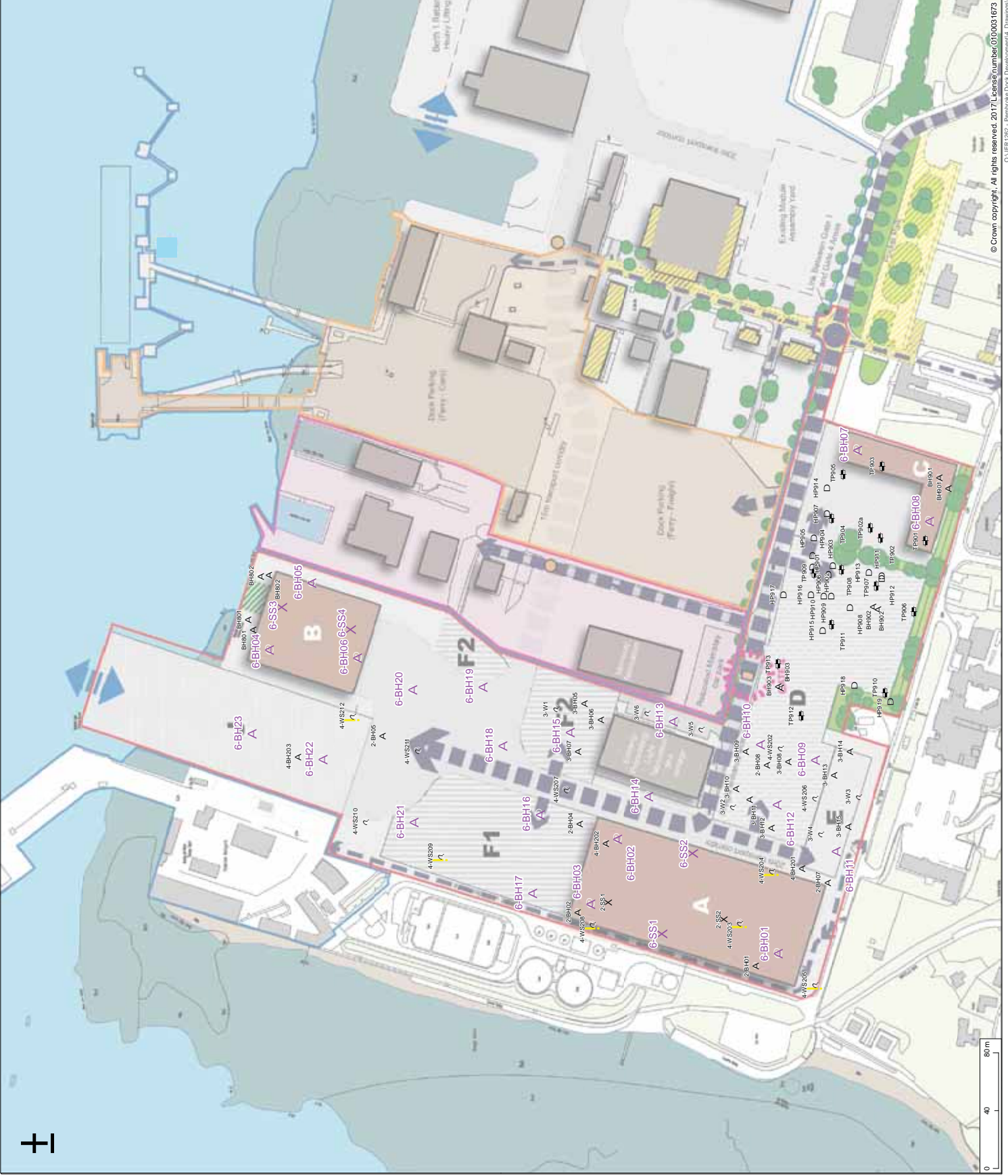
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Legend

Site Boundary

Historic Investigation Locations

- A Borehole
 - Window Sample Borehole
 - Hand Dug Pit
 - Sediment Sample
- Proposed Investigation Locations**
- A Borehole
 - X Sediment Sample
 - Sampling from Historic Borehole



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Client MILFORD HAVEN PORT
Authority AUTHORITY
Project PEMBROKE DOCK MARINE DEVELOPMENT
Title PROPOSED INVESTIGATION LOCATIONS

Status PRELIMINARY
Drawn By RJ
Job Ref JER1262
Scale @ A3 1:2,500
Date Created MAY 18
PM/Checked By AT

Drawing Number JER1262-SR-001
Rev -

Initial
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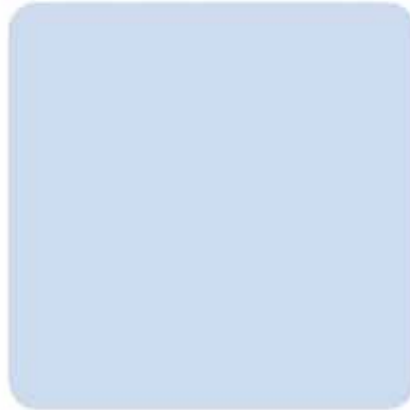
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APPENDICES

APPENDIX 1: DESK-TOP STUDY AND PRELIMINARY RISK ASSESSMENT



Desk-Top Study and Preliminary Risk Assessment
Pembroke Dock Marine Development
On Behalf of Milford Haven Port Authority





Date: June 2018
Our Ref: JER1262
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Quality Management

Prepared by:	Alice Thomas BSc MSc FGS	
Authorised by:	Gary Riches BSc FGS	
Date:	June 2018	
Revision:	0	
Project Number:	JER1262	
Document Reference:	180419 R JER1262 AT DTS and PRA_FINAL	
Document File Path:	O:\JER1262 - Pembroke Dock Development\5. Reports\1. Draft Report\DTS and PRA\180419 R JER1262 AT DTS and PRA_FINAL.docx	

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Amendment Record

Revision No.	Date	Reason for Change	Authors Initials
Revision 1	15/06/2018	Provision of further historical ground investigation data.	PT

Executive Summary

RPS was commissioned by Milford Haven Port Authority to undertake a Phase 1 Desktop Study (DTS) and Preliminary Risk Assessment (PRA) report to support the Outline Planning Application for the Pembroke Dock Marine Development.

The proposed redevelopment of the Assessment Site comprises the creation of transport corridors, open-air lay down areas, increased dockside space and buildings for a variety of engineering purposes. The proposed design also includes infilling of a graving dock and timber pond, and widening of a slipway.

Previous site specific reports provided by the Client have been reviewed and summarised. These reports are listed in Section 1.4.

RPS undertook a site reconnaissance visit as part of this report. An annotated plan and photographs are provided, as *Drawing JER1262-DTS-001* and Appendix 2. The visit made the following observations of note; presence of electrical sub-stations, fuel tanks, demolition rubble and oily sheens on rainwater puddles near the scrap yard.

Potential current contamination sources identified at the Assessment Site include sewage works (immediately off-site) storage of fuel oil, scrap yard, presence of electrical sub-stations and spoil heaps (potential hydrocarbons, PCBs and asbestos contamination). Identified potential historical sources include localised storage tanks, railway lines, electrical sub-stations, car dealers/breakers, manufacturing/engineering (potential hydrocarbons, solvents, PCBs, heavy metals, ground gas/vapours and asbestos contamination), historical off-site gas works and a Depot feature to the south (potential ground gas/vapours to migrate to Assessment Site) and chemical contamination of shallow/perched groundwater (potential cyanide, hydrocarbons, solvents, PCBs, heavy metals and vapours).

A risk assessment based on a proposed future commercial use of the Assessment Site has been carried out. It is considered that the maximum risk for risks to human health from chemical contamination of soils/groundwater is low to medium. It is considered that the maximum risk for risks to buildings and structures from aggressive ground conditions and potential explosion/fire risk is also low to medium. It is considered that the maximum risk is low to medium, for risks to controlled waters.

Current data is not available for all parts of the Assessment Site which are proposed to be developed. Whilst some of the available data is relatively old (2006) it is considered that it is likely to have characterised the historical contamination sources and contaminating activities at the Assessment Site. It is therefore recommended that further targeted intrusive investigation is undertaken in the specific areas of the Assessment not previously characterised and that the existing data is reassessed against current standards to confirm the need for mitigation with respects to contamination at the Assessment Site. Such investigation would also allow the geotechnical risks associated the potential presence of running sands and solution features in the limestone bedrock to be refined for the areas investigated.

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Appendices

Appendix 1	Desk-Top Study Methodology
Appendix 2	Photographic Record
Appendix 3	Envirocheck Professional Report including historical maps

1 Introduction

1.1 Background

- 1.1.1 RPS Planning and Development ('RPS') was commissioned by Milford Haven Port Authority ('the Client') to undertake a Phase 1 Desktop Study (DTS) and Preliminary Risk Assessment (PRA) report to support the Outline Planning Application for the Pembroke Dock Marine Development.
- 1.1.2 The assessment has been undertaken to a standard that is considered suitable to meet the initial requirements of planning as outlined within the National Planning Policy Framework (NPPF) (Ref. 5).

1.2 Proposed Development

- 1.2.1 The proposed redevelopment of the Assessment Site comprises the creation of transport corridors, open-air lay down areas, increased dockside space and buildings for a variety of engineering purposes.
- 1.2.2 A Draft Masterplan is given as *Drawing JPW1115-04*. This shows that new buildings are proposed; in the northwest (including infilling of the graving dock), in the southwest (including infilling of Timber Pond) and in Milforge Site. Additionally, it is shown that an area between Slipway 1 and Slipway 2 will be infilled. The relevant contamination sources in these areas of development are given below.

1.3 Objectives

- 1.3.1 The objectives of this assessment are to:
- Assess likely existing ground conditions, including geological, hydrogeological and hydrological conditions to establish baseline conditions and allow an assessment of environmental sensitivity;
 - Identify potential contamination sources, both from historical and current activities, that may have led to contamination of the Assessment Site; and
 - Develop a PRA including a Conceptual Site Model (CSM) to support an assessment of the likely risks associated with potential contamination at the Assessment Site.
- 1.3.2 The methodology followed to produce this DTS and PRA is detailed in *Appendix 1* and is in line with Environment Agency guidance (*Ref. 7*).

1.4 Previous Reports

- 1.4.1 The following reports have been made available to RPS in relation to the Assessment Site:

- Port of Pembroke – Culvert Traverse Survey Letter report, by Sewer Services Ltd on behalf of W S Atkins, ref: 417-3/WFR/vjf, dated 24th May 1999.
- Land Quality Assessment Phase 1: Desk Study, HM Mooring Depot Pembroke Dock, by Enviros Consulting Ltd on behalf of Defence Estates, ref: 12553, dated October 2006.
- Land Quality Assessment Phase Two: Intrusive Investigation, HM Mooring Depot Pembroke Dock, by Enviros Consulting Ltd on behalf of Defence Estates, ref: 12553, dated April 2007.
- Ex-RMAS Site, 2020 Condition Survey Report, by Atkins on behalf of Milford Haven Port Authority, ref: 5056549-2/DG01-3, dated December 2008.
- Gate 4 Pickling Pond Culvert System, Preliminary Inspection Report, by Atkins on behalf of Port of Milford Haven, ref: 5116155-008/DG01_Inspection Report, dated 21st June 2013 (this includes and updates a report from 20th September 2010).
- Site within Gate 1 Pembroke Dock Pembrokeshire, Preliminary Risk Assessment, ground conditions and contaminated land, by RSK Environment Ltd on behalf of Port of Milford Haven Limited, ref: 312994-R1(00), Status: Final, dated March 2015.
- Phase I Ground Investigation Interpretative Report, Pembroke Dock Port, by Quantum Geotechnical on behalf of Milford Haven Port Authority, ref: G624/IR, dated April 2015.
- Pembroke Dock Geotechnical Desk Study, by Royal Haskoning DHV on behalf of Milford Haven Port Authority, ref: PB4337R002, rev. 01/Final, dated 13th November 2015.
- UXO Desk Study & Risk Assessment, Pembroke Dockyard by Zetica Ltd on behalf of Royal Haskoning DHV, ref: P5692-15-R1 rev B, dated 7th December 2015.
- Milford & Pembroke Docks, Ground Investigation Factual Report, by Quantum Geotechnical Ltd on behalf of Milford Haven Port Authority, ref: G778/FR, rev 1, dated June 2016.
- Pembroke Dock Redevelopments, Ground Investigation Report, by Royal Haskoning DHV on behalf of Milford Haven Port Authority, ref: PB4337R007D01, rev. 01/Draft, dated 3rd August 2016.

1.5 Limitations of this Report

- 1.5.1 This assessment is limited to the information available at the time of production including published environmental / geological data (*Ref. 3, 4 & 6*), Envirocheck Report (*Ref. 8*), observations made during a site reconnaissance visit undertaken by a consultant from RPS on 24th January 2018, and a review of the available ground investigation reports listed above. The comments given in this report and the opinions expressed are based on a variety of sources which RPS believes to be reliable but cannot guarantee their authenticity or accuracy. There may also be information for the site and its surrounding area that has not been disclosed by previous ground investigation reports and therefore has not been considered in this report.

2 Site Location and Description

2.1 Site Location

- 2.1.1 The Assessment Site is located in the town of Pembroke Dock in Pembrokeshire, South West Wales, approximately 4 km northwest of Pembroke on the northern banks of the River Cleddau. The Assessment Site is located at the approximate grid reference SM 96006 03670, and the approximate postcode is SA72 6TD.
- 2.1.2 The Assessment Site is accessed from Meyrick Owen Way. Pembroke Dock railway station is located approximately 0.65 km to the east of the Assessment Site.
- 2.1.3 The Assessment Site is approximately 30 hectares in size and is roughly rectangular in shape.
- 2.1.4 The site layout is shown on *Drawing JER1262-DTS-001*.

2.2 Site Setting

- 2.2.1 The Milford Haven Waterway is present to the north, and west. The Assessment Site is bounded by residential areas to the south and east. The Assessment Site is bounded by a sewage works to the west. The Assessment Site is currently used for a variety of commercial/light industrial land uses including marine engineering. Within the boundary of the dockyard lies two areas not under control of the Client; the ferry terminal and an area in use as a garage and scrap yard.
- 2.2.2 Further details on land use are given in the table in Section 3.

2.3 Site Reconnaissance

- 2.3.1 A site reconnaissance visit was undertaken by a RPS engineer on 24th January 2018. This included discussions with Adrian Rowlands, Engineering Project Manager, and Steve Phillips, Port Engineer, from Milford Haven Port Authority.
- 2.3.2 An annotated plan showing the areas covered during the site reconnaissance visit is given as *Drawing JER1262-DTS-001*. A photographic record is given in *Appendix 2*.
- 2.3.3 The interview with site staff indicated that the redevelopment could include, amongst other:
- infilling of the Timber pond;
 - removal of the area between Slipway 1 and Slipway 2, to create a larger width slipway; and,
 - the graving dock could be infilled to create more available outside space along the dockside.
- 2.3.4 The area of the existing businesses is not included in the proposed redevelopment plans.
- 2.3.5 The Assessment Site is split into a number of different areas, accessed via different gates. The site visit included the area accessed via Gate 1 entrance in the northeast, the area known as

the Milforge Site in the south, the area accessed via Gate 4 in the southwest, and the area around the graving dock in the northwest.

- 2.3.6 Areas not visited included the active ferry port and the businesses on land not owned by the Milford Haven Port Authority (garage/scrap yard). The insides of buildings were not inspected. The area of the active ferry port can be seen on the *Drawing JPW1115-04*, and the scrap yard and garage is labelled on *Drawing JER1262-DTS-001*.

Gate 1 area

- 2.3.7 Gate 1 provides access to the eastern half of the Assessment Site, and is accessed from Front Street off Western Way, to the northeast of the Assessment Site. Buildings/features currently onsite in this area include:

- Security gate (see Plate 1) and administration building;
- Warehouses including Eastern Sunderland Hanger and Western Sunderland Hanger (see Plate 2);
- An area of sand storage on the quay to the north of the security gate;
- Skips and waste bins to the north of the security gate (see Plate 3);
- A double-skinned diesel fuel tank (15,000 Litre capacity), with no evidence of leakage, on the corner of one of the warehouse buildings (see Plate 4);
- Two empty water tanks, connected to a small structure labelled 'Sprinkler Stop Valve Inside' (see Plate 2);
- A vehicle washdown area along the eastern boundary, and;
- An electrical sub-station in the southwest corner of the area accessed from Gate 1.

- 2.3.8 An empty bunded area with plinths provides evidence of the location of a historical fuel tank adjacent to the current tank (see Plate 5).

- 2.3.9 At the time of the site reconnaissance visit, mobile homes and sections of oil processing plant were being stored on hardstanding in the Gate 1 area (see Plate 6). No visual or olfactory evidence of oil was noted from the sections of pipework etc. which are awaiting transfer overseas. Limited areas of soft standing are present, mainly around the margins of the Gate 1 area. The majority of this area is laid to concrete or asphalt which appears to be generally good condition.

Milforge Site

- 2.3.10 The area known as the Milforge Site along the southern boundary of the Assessment Site was visited as part of the site reconnaissance. This area is bound to the north by Whites Farm Way and to the east by Melville Terrace.

- 2.3.11 Buildings/features currently onsite in this area include:

- Security Gate 4 to the north;

- Overgrown area of vegetation (see Plate 8);
- Compacted gravel, demolition material (see Plate 9);
- Two disused warehouse-type buildings (side by side);
- An electrical sub-station is present along the boundary with Whites Farm Way; and,
- Many mature trees.

2.3.12 The interview with site staff indicated that Tree Protection Orders are in place in the areas of overgrown vegetation shown on *Drawing JER1262-DTS-001*. Within one of the disused buildings is a boat, and in the other is a pit in the middle of the floor (possibly a vehicle inspection pit for undertaking repairs) (see Plate 10). This pit is not fenced off and wasn't investigated fully for health and safety reasons. The interview with site staff indicated that the demolition material in this area has been moved and mounds flattened (within the Milforge Site) since an investigation was undertaken here in 2016 by Quantum (see Section 5.11). The demolition material includes visually identifiable pieces of asphalt and concrete. Fly-tipped waste was also evident in this area (see Plate 11).

2.3.13 A disused tower (a Scheduled Monument) is present to the west (see Plate 7) located outside the application boundary. The interview with site staff indicated that the disused Scheduled Monument once stood on the coastline, and therefore that the land to the north is likely to be reclaimed.

Gate 4

2.3.14 Security Gate 4 provides access to the western third of the Assessment Site. Buildings/features currently on-site in this area include:

- A large square water body in the southwest corner of the Assessment Site (the 'Timber' or 'Pickling' Pond) (see Plate 12 and below),
- Grassed areas,
- Mobile home storage,
- Fuelling point comprising two plastic, banded, fuel tanks, a control board and a small hut (see Plate 14). No evidence of stains or leaks was observed,
- An electrical sub-station, and
- An area of burnt ground on one of the grassed areas, circled by corrugated iron sheeting (see Plate 13).

2.3.15 The Timber Pond has two main inlets/outlets; one along the northern wall (oval-shaped) and another (sluice) along the western wall. These connections are discussed further in Section 5.6. Additional small, presumably surface water outlets were evident, mainly along the eastern wall. The eastern face of the pond slopes down gently.

2.3.16 An unused gate through the wall around the Assessment Site is present in the southwest corner.

2.3.17 The majority of this area is laid to concrete or asphalt which appears to be generally good condition. Surface water drainage was present and appeared to be unobstructed where observed.

North West Area

2.3.18 Buildings/features currently onsite in this area include:

- Existing businesses,
- Two slipways ('Slipway 1' and 'Slipway 2') (see Plates 15 and 16). No structures are present in the area between the slipways,
- The gas supply to the Assessment Site enters into a building south of Slipway 1 and a control valve was observed (see Plate 17),
- A storage container labelled 'Warning Hazchem' and 'Paint store' is present to the south of Slipway 2 (see Plate 18), and
- An electrical sub-station is present between Slipway 2 and the 'triangle' area (see Plate 22).

2.3.19 The walls facing the estuary were visually assessed at low tide, from above, and no signs of contamination were observed (see Plate 19).

2.3.20 To the east of Slipway 2 is the area known as 'Gate 4' in some of the reports reviewed later in this document. This area comprises a fenced off disused dry dock, also called the graving dock (see Plate 20). To the south of here is an area known as the 'Triangle' which is an area of land not controlled by the port authority. Businesses on this area include a scrap yard and garage. A listed building is understood to be present in this area. Oily sheens were observed on rainwater puddles outside of the scrap yard (see Plate 21). The ground surface around the graving dock is partly vegetated and partly hardstanding (see Plate 23). The hardstanding in this area appeared to be in poor condition.

2.3.21 The majority of this area is laid to concrete or asphalt which appears to be generally good condition. Surface water drainage was present and appeared to be unobstructed where observed.

3 Land Use

3.1 General

- 3.1.1 This section sets out details of the current and historical land use of the Assessment Site and the surrounding area. The data presented does not represent full details of all land uses, but those that are considered to have the potential to have led to contamination of the Assessment Site. For full details of the land use, the Envirocheck Report included within *Appendix 3* should be consulted.

Table 3-1 Land Use

Section	Description/Information		Comments / Potential Contamination Sources
Site Size	The Site is approximately 30 hectares in size.		N/A
Current Site Description / Layout*	The Assessment Site is currently in use by a number of businesses for a range of commercial uses including a ferry port, scrap yard, garage, animal feed storage, mobile home storage and marine engineering. The majority of the Assessment Site is laid to hardstanding. Scrub vegetation was noted in a number of areas (mainly in the Milforge Site and in the southwest).		Potentially contaminative activities are present on site including fuel storage, scrap yard and garage.
Current Neighbouring Land Uses* (500m)	South Pembroke Hospital is present immediately to the south. Residential properties are present to the east and south. Milford Haven Estuary is present to the north and west.		N/A
Site History** <i>(Labelled features from the maps are given here in italics)</i>	Date		<p>The following have been identified as potentially significant on-site sources of contamination:</p> <ul style="list-style-type: none"> ▪ Localised areas of tank storage (inorganic and organic contamination), ▪ The historical presence of rail tracks across the Site (inorganic and organic contamination), ▪ The historical presence of oakum storage (tar, creosote, asphalt), ▪ The historical presence of ordnance storage and rifle range (Ref. 17) (UXO), ▪ The historical and ongoing use for
	From	To	
	1862	1866	
	1866	1869	
1869	1909		
<p>On-site Land Uses</p> <p>Ports own historical maps: A <i>Tar Tank</i> is shown along the southern boundary, south of the <i>Timber Pond</i> in the southwest of the Site (in its present location). <i>Slipways No.1 to No. 13</i> are shown along the boundary with the estuary, and numerous buildings associated with wooden shipbuilding are shown (<i>Timber Sheds, Pitch House, Saw Mills, Joiners Shops, Oakum Store</i>). Also of note is a <i>Foundry, Smithy, Plumbers Shop, Fitting Shop and Coal Yard</i>. Drains are shown including a culvert possibly draining surface water to the <i>Timber Pond</i>.</p> <p>A <i>Saw Pit</i> is shown in the southwest (a deep pit for sawing long planks of wood). No development shown in most of the Assessment Site.</p> <p>The Assessment Site is shown as developed with numerous buildings. <i>Building Slips, Timber Pond, Drill Battery & Stables</i> and a <i>Saw Pit</i> are shown.</p>			

Section	Description/Information		Comments / Potential Contamination Sources
	1909	The site is shown as blank, presumably due to its strategic position during the war years.	<p>light industrial/commercial,</p> <ul style="list-style-type: none"> ▪ The presence of electrical sub-stations indicate potential contamination from PCBs, ▪ The presence of salvage activities mean contamination from fuels, oils and heavy metals is possible.
	1925	Ports own historical map: <i>Oil Tanks</i> are shown in the far northwest of the Assessment Site, in addition to the industrial activities noted on earlier maps.	
	1950	The outlines of a jetty, dry docks, buildings and railway tracks are shown without labels.	
	1953	Simply labelled as <i>Flying Boat Base</i> with no structures shown. The western boundary with the estuary appears to extend further into the estuary than previously.	
	1964	The site is shown as blank, presumably due to its use by the Royal Navy.	
	1967		
		Ports own historical maps: In the northeast of the Site (Gate 1 area), buildings denoted as <i>Aircraft Services Hanger</i> , <i>Bulk Fuel Installation</i> and <i>Dome Teacher</i> are shown. A 'Dome Teacher' is understood to be a training area for anti-aircraft gunners.	
	1957	<p>Another <i>Bulk Fuel Installation</i> is shown within the present day Ferry Port area. A further <i>Bulk Fuel Installation</i> is shown within the present day Graving Dock area. <i>Pyrotechnics</i>, a <i>Bomb Store</i> and <i>Detonator Store</i> are shown between the graving dock and present day Ferry Port.</p> <p>West of the Gate 4 area, storage buildings are present including <i>Lube Oil Storage</i>. North of the Millforge Site in the south of the Assessment Site, buildings including <i>Diesel Tanks</i>, <i>Workshops</i> and <i>Inflammable Stores</i>.</p>	

Section	Description/Information		Comments / Potential Contamination Sources
	1967	Along the northern boundary of the Assessment Site, <i>Tanks</i> , a <i>Jetty</i> , <i>Dry Docks</i> and <i>Slipways</i> are shown. The site appears to be labelled as <i>Royal Naval Boom Defence Depot</i> . Railway tracks are seen across the Assessment Site, extending from the eastern boundary to the <i>Jetty</i> . <i>Pembroke Dockyard</i> is labelled.	
	1974	A <i>Helicopter Landing Pad</i> and <i>Motor Museum</i> is shown in the southeast.	
	1985	A <i>Ship Ferry Terminal</i> is labelled and two additional jetties are shown extending north into the estuary.	
	1989	<i>Hoppers</i> and a <i>Depot</i> are labelled, as are two <i>Electrical Substations</i> . <i>Tanks</i> are no longer shown (although they are shown on later maps). The site is no longer labelled as <i>Royal Naval Boom Defence Depot</i> . A <i>Garage</i> is shown in the southwest. The <i>Helicopter Landing Pad</i> is no longer shown.	
	1994	A <i>Mooring and Marine Salvage Depot</i> is shown in the northwest corner of the Assessment Site. <i>Tanks</i> are shown in the northeast.	
	1995	A second <i>Electrical Substation</i> is now shown close to the earlier identified one.	
	2006	The <i>Pembroke Dock Heritage Centre</i> is in the building previously labelled as <i>Motor Museum</i> . Current road layout is shown.	
	Date	Surrounding Land Uses	The following have been identified as potentially significant off-site sources of contamination:
From			
	To	Gas Works are shown immediately to the south of the southwest corner. Housing is shown to the east and predominantly fields to the south.	<ul style="list-style-type: none"> ▪ The historical presence of a Gas Works adjacent to the southern site boundary,

Section	Description/Information		Comments / Potential Contamination Sources		
	1866	1909	<ul style="list-style-type: none"> The unknown nature of the Depot, now in use as South Pembrokeshire Golf Club. 		
	1909	1953			
	1925	1925			
	1953	1964			
	1964	1966			
	1966	1967			
	1967	1971			
	1971	1994			
	1994	2017			
	2017	2017			

Section	Description/Information		Comments / Potential Contamination Sources
Land Use	<i>Distance & Direction</i>	<i>Details</i>	
Landfills (500 m)***	178 m East	<p>There is 1 no. entry (not active) for a Registered Landfill Site within 500 m.</p> <p>License Holder: Govan Davies Developments Limited Site Location: Dry Dock & Part Of West Lianion Pill Max input rate: 'Medium' (25,000-75,000 tonnes per year) Date started: 01/10/86, now lapsed/cancelled/defunct/not applicable/surrendered Authorised waste included: stone, brick, hardcore, concrete</p>	The risk from this off-site historical inert landfill is considered to be low, due to the nature of materials accepted.
Waste Treatment, Transfer and Disposal Sites (500 m)***	On-site	There are 3 no. active entries for Licensed Waste Management Facilities at the Assessment Site. These relate to two sites and concern Household, Commercial and Industrial Transfer Stations and Metal Recycling Sites respectively.	The permitted nature of these activities reduces the risk of contamination from said facilities.
Potentially Contaminative land Uses*** (250 m)	Off-site	None recorded.	N/A
	On-site:	Potentially contaminative land uses (active and inactive) on site include dockyard, garages, electrical manufacturers, haulage, mechanical engineers, engineering services, used car dealers, ship builders/repairs/fittings, scrap metal merchants, car breakers and oil fuel distributors.	There is the potential for the previous and current land uses at the site to have given rise to contamination of soils and underlying groundwater.
Petrol and Fuel Sites*** (250 m)	Off-site:	Potentially contaminative land uses (active and inactive) off-site include tyre dealers (131 m southeast), vehicle repairs (201 m east) and garage services (249 m east).	Given the distance, it is considered unlikely that these land uses will have affected the land at the Assessment Site.
	On Site	None recorded	N/A
	Off-Site	None recorded.	N/A

Section	Description/Information		Comments / Potential Contamination Sources
Authorisations / Licences (250m)***	On-Site	The Assessment Site is listed as an active Explosive Site (Royal Dockyard, Pembroke Dock).	Any intrusive ground investigations may need to avoid certain areas of the site if this characterisation is correct.
	Off-Site	None recorded.	N/A
Recorded Pollution Incidents (Controlled Waters) (250m)***	On-Site	Location: Pembroke Dock Pollutant: Farm Effluent/Slurry Incident Date: 28/02/95 Receiving Water: Not Given Severity: Category 3 – Minor Incident Location: Carrs Rock Outfall Pollutant: Farm Effluent/Slurry Incident Date: 27/02/95 Receiving Water: Not Given Severity: Category 3 – Minor Incident	Considering the scale and the dates of these incidents, these incidents are not considered to provide a contamination risk at the Site.

Section	Description/Information		Comments / Potential Contamination Sources
	Off-Site	<p>While not listed in the Envirocheck report, it should be noted that in February 1996, an oil-tanker (MV Sea Empress) lost a large quantity of crude oil in the Milford Haven, approx. 15 km to the west of the Assessment Site.</p> <p>Location: Llanreath Beach Pollutant: Heavy Fuel Oil Incident Date: 26/11/97 Receiving Water: Not Given Severity: Category 3 – Minor Incident</p> <p>Location: Pembroke dock Ferry Terminal Pollutant: Oils-Diesel Incident Date: 13/01/98 Receiving Water: Not Given Severity: Category 3 – Minor Incident</p>	
Pollution Prevention and Controls*** (500 m)	On-Site	There is 1 no. Integrated Pollution Prevention and Control entry listed on the Assessment Site (now revoked). This related to Celtic Biodiesel Limited.	
	Off-Site	There are no entries listed off site within 500 m.	N/A
Discharge Consents (500 m)***	Off Site	There are 5 no. active discharge consents listed within 500 m of the Assessment Site. These consents are: 3 no. consents for Public Sewage: Storm Sewage Overflow, 1 no. consent for Sewage-Crude to Further Treatment-Water Company, and 1 no. consent for Sewage Discharge-Final/Treated Effluent-Water Company. These consents related to the discharge into a saline estuary (Milford Haven) (2 no.) and a freshwater stream/river (Milford Haven Waterway) (3 no.).	These consents all relate to the discharge of effluent. They are considered to pose a low risk.

Section	Description/Information		Comments / Potential Contamination Sources
	On Site	There is 1 no. active discharge consent listed for the Assessment Site. This relates to trade discharges and site drainage into the Milford Haven Estuary. The consent is held by the Milford Haven Port Authority.	

* based on site reconnaissance and review of Envirocheck Professional Report (Ref. 8)

** based on review of Historical Maps (Ref. 8) obtained from Envirocheck, and on reviews by others

*** based on review of Envirocheck Professional Report (Ref. 8)

4 Environmental Setting

4.1 General

- 4.1.1 This section sets out details of the environmental setting of the Assessment Site and the surrounding areas.

Table 4-1 Environmental Sensitivity

Section	Description / Information			Issues / Comments	
	Strata	Description	Aquifer Status		
Geology & Hydrogeology**	Made Ground	<p>Hardstanding comprising concrete and asphalt was identified during the site reconnaissance visit. Compacted gravel was observed.</p> <p>The previous investigations noted concrete, asphalt, gravel and silt at the surface. Cobbles and boulders of concrete and limestone were often encountered.</p>	N/A	<p>Previous investigations record up to 8 m</p>	<p>Made Ground is expected to be present across the site, including potentially underlying hardstanding and in areas of historical development. The entire site may be made up of reclaimed land, according to site staff.</p> <p>Groundwater may be present within the Made Ground.</p>
	Superficial Deposits	<p>Tidal Flat Deposits (clay, silt, sand, gravel, peat) are expected according to published geological information. The presence of superficial deposits is confirmed by the recent ground investigations by others.</p>	Secondary Aquifer (Undifferentiated)	Up to 6 m thick, where present	Superficial Tidal Flat Deposits are expected along the coastal edges of the Assessment Site.
	Bedrock	<p>Pembroke Limestone Group (limestone, mudstone, sandstone) in the south.</p> <p>Black Rock Sub-group and Gully Oolite Formation (limestone, mudstone, sandstone) to the north</p>	Principal Aquifer	Up to 1025 m thick (Ref. 4)	<p>The bedrock has been found to be weathered at the upper boundary by the recent ground investigations by others.</p> <p>The limestone bedrock has been found by others to dip at approx. 45 degrees to the south (Ref. 14). Sites underlain by limestone can be prone to the presence of natural solution features (including "solution pipes") formed by dissolution of the</p>

Section	Description / Information		Issues / Comments
			soluble strata. These features can be present in a stable or potentially unstable condition and metastable cavity forms may be disturbed and triggered to cause ground subsidence. Trigger mechanisms may include loading, leaking drains, or water supply pipes. The Envirocheck report does not record any features within 1 km.
Groundwater Vulnerability	The superficial stratum does not have a groundwater vulnerability classification. The bedrock geology is classed as Soils of High Leaching Potential (U).		It is considered that due to the proximity of the estuary, the groundwater is likely to be impacted by saline intrusion. Extracted groundwater from this area is unlikely to be suitable for drinking water and subsequently the sensitivity is lower than would otherwise be expected for a principal aquifer.
SPZs* (500m)	Distance & Direction	Details	
	On site	None Identified	None recorded
	Off site	None identified within 500 m of the Assessment Site.	None recorded
Surface Water (1km)*	On-site	The only surface water body on site is the Timber Pond, and where docks are within the Assessment Site boundary along the northern edge The northern half of the Assessment site has a Limited Potential for Groundwater Flooding to occur. The southern half of the site has the Potential for Groundwater Flooding of Property Situated Below Ground Level. Small areas of the Assessment Site (in the southeast and southwest corners) have the Potential for Groundwater Flooding to Occur at Surface. Limited areas along the northern edge of the Assessment Site are shown to be at risk from Flooding from Rivers or Sea without Defences (Zone 3) and Extreme Flooding from Rivers or Sea without Defences (Zone 2). Some areas of the Assessment Site (mainly in the southern half) are considered to be at risk (low to high) of Flooding from surface Water.	There is a risk of flooding at the Assessment Site, mainly from surface waters but also partly from groundwater.
	Off site	The Milford Haven Waterway and Estuary (SSSI) is present to the immediate north of the Assessment Site.	The estuary is the main receptor for potential contamination leaching/migrating from soils and/or

Section	Description / Information		Issues / Comments
			groundwater below the Assessment Site. Currently extensive hardstanding limits infiltration of rainwater, although it is in poor condition in places.
Licensed Water Abstractions (1km)*	On site	None recorded.	N/A
	Off site	None within 1 km.	N/A
Conservation Areas & Sensitive Land Use (1 km)*	On site	The Assessment Site does not lie within a Nitrate Vulnerable Zone.	This designation is not relevant to the proposed development.
	Off Site	A Site of Special Scientific Interest (SSSI) (Milford Haven Waterway) is present to the west of the Assessment Site. A Special Area of Conservation (SAC) is present to the north and west (Milford Haven Waterway). An Environmentally Sensitive Area (Preseli) is present 895 m to the north.	The ecological status of the surrounding area means that it would be sensitive to any contamination migrating from the Assessment Site.
		Details	
Radon*	Yes	The Assessment Site is within a higher probability radon area - where 10% to 30% of homes are estimated to be at or above the Action Level.	Full radon protection measures are required in the construction of new dwellings or extensions.
Coal Mining*	No	The Assessment Site is not in an area that is recorded as impacted by coal mining.	N/A
BGS Recorded Mineral Sites (1 km)*	On site	1 no. active entry is listed for Old Dock Yard, Commercial Row in relation to Marine Sands and Gravels.	This entry likely related to dredging activities and therefore the risk of contamination is considered to be low.
	Off site	No entries are listed within 1 km off-site.	N/A
Historical Surface Ground Working Features	On site	None identified	N/A
	Off site	None identified	N/A
Founded Strata / Landslide*	On site	The Envirocheck Report suggests that there is: <ul style="list-style-type: none"> • A very low hazard potential for shrink-swell clay • A very low hazard potential for landslides 	According to the Landmark Envirocheck report, natural ground stability hazards at the Assessment Site are considered to be very low to moderate.

Section	Description / Information	Issues / Comments
	<ul style="list-style-type: none"> • A moderate hazard potential for compressible ground • A very low hazard potential of collapsible rocks • A moderate hazard potential for running sand • A low hazard potential for dissolution 	<p>The moderate rating of compressible ground hazards indicates the potential for differential settlement of the ground under loading. Geotechnical testing and calculation of bearing capacities should be considered during design of proposed structures and infrastructure. Consideration should be given to the potential for running sands during ground investigations and development phases.</p> <p>While dissolution is described in the Envirocheck report as low, the potential for dissolution features within the limestone bedrock should be considered during any investigation and development.</p>

* based on review of Envirocheck Professional Report (Ref. 8)

** based on review of Historical Maps (Ref. 8) obtained from Envirocheck, and on reviews by others

5 Previous Reports

5.1 Introduction

5.1.1 The following reports have been reviewed as part of this Desk-Top Study:

- Port of Pembroke – Culvert Traverse Survey Letter report, by Sewer Services Ltd on behalf of W S Atkins, ref: 417-3/WFR/vjf, dated 24th May 1999.
- Land Quality Assessment Phase 1: Desk Study, HM Mooring Depot Pembroke Dock, by Enviros Consulting Ltd on behalf of Defence Estates, ref: 12553, dated October 2006.
- Land Quality Assessment Phase Two: Intrusive Investigation, HM Mooring Depot Pembroke Dock, by Enviros Consulting Ltd on behalf of Defence Estates, ref: 12553, dated April 2007.
- Ex-RMAS Site, 2020 Condition Survey Report, by Atkins on behalf of Milford Haven Port Authority, ref: 5056549-2/DG01-3, dated December 2008.
- Gate 4 Pickling Pond Culvert System, Preliminary Inspection Report, by Atkins on behalf of Port of Milford Haven, ref: 5116155-008/DG01_Inspection Report, dated 21st June 2013 (this includes and updates a report from 20th September 2010).
- Site within Gate 1 Pembroke Dock Pembrokeshire, Preliminary risk assessment, ground conditions and contaminated land, by RSK Environment Ltd on behalf of Port of Milford Haven Limited, ref: 312994-R1(00), Status: Final, dated March 2015.
- Phase I Ground Investigation Interpretative Report, Pembroke Dock Port, by Quantum Geotechnical on behalf of Milford Haven Port Authority, ref: G624/IR, dated April 2015.
- Pembroke Dock Geotechnical Desk Study, Desk Study, by Royal Haskoning DHV on behalf of Milford Haven Port Authority, ref: PB4337R002, rev. 01/Final, dated 13th November 2015.
- UXO Desk Study & Risk Assessment, Pembroke Dockyard by Zetica Ltd on behalf of Royal Haskoning DHV, ref: P5692-15-R1 rev B, dated 7th December 2015.
- Milford & Pembroke Docks, Ground Investigation Factual Report, by Quantum Geotechnical Ltd on behalf of Milford Haven Port Authority, ref: G778/FR, rev 1, dated June 2016.
- Pembroke Dock Redevelopments, Ground Investigation Report, by Royal Haskoning DHV on behalf of Milford Haven Port Authority, ref: PB4337R007D01, rev. 01/Draft, dated 3rd August 2016.

5.1.2 Each report is summarised below, including the areas covered, assessments made and conclusions reached.

5.2 Culvert Traverse Survey by Sewer Services, May 1999

5.2.1 A survey of an east-west running culvert below the south of the Assessment Site was undertaken by person entry in 1999. This did not note any signs of contamination, other than a foul odour close to the estuary outlet to the west which was noted to have been contributed to washed up debris rather than a foul sewer connection.

5.2.2 The culvert runs from the gardens between Melville Street and Meyrick Owen Way, west to an outfall in the estuary. The culvert runs below the site known as Milforge.

5.3 Land Quality Assessment Phase 1, Enviros Consulting Ltd, October 2006

5.3.1 This report comprises a desk-based assessment of the environmental condition of the western third of the current Assessment Site. The report included a walkover survey and summaries of previous desk-based studies and intrusive investigations.

5.3.2 The potential sources of contamination identified were former standby generators (hydrocarbon fuels), former metal foundry, coal yard and paint shop (lead, arsenic, PAHs, phenols, copper and zinc), former oakum store (tar, creosote, asphalt), Made Ground (heavy metals, hydrocarbons and PAHs), former lube oil store (hydrocarbon fuels and phenols), former transformers (oil, PCBs), former rifle range (lead, gunpowder residues), former locomotive shed (hydrocarbons, PAHs, metals), former railway lines (PAHs, PCBs, metals, asbestos), current POL Point (petroleum, oil, lubricants) and emergency generator (hydrocarbon fuels and phenols), current and historical use for maintenance works (metals, solvents, hydrocarbons) and sediments from Mast Pond (also called Timber Pond) (lead, arsenic, mercury and chromium).

5.3.3 The following reports are discussed in the report. A plan showing the locations of the exploratory holes advanced as part of each of the intrusive investigations is given in an appendix to the report. It should be noted that RPS have not had sight of the reports or chemical data, only the borehole logs from the Gibb (2001) and Enviros (2004) intrusive investigations.

Table 5-1. Reports reviewed by Enviros Consulting Ltd in LQA Phase 1, October 2006

Report title and date	Brief description
CESO(N) Phase I Land Quality Assessment AD/ScET Report No. ES350/98/16, dated 1998.	Not discussed.
Land Quality Assessment Phase II: Intrusive Assessment, HM Mooring Depot Pembroke Dock, by Gibb Environmental, ref: 11852, dated February 2001.	Whole Assessment Site. 11 no. boreholes to max. 6 m bgl. 6 no. sediment samples from the Timber Pond and foreshore.
Disposal Area One, HM Mooring Depot, Pembroke Dock, Combined Phase I and II Land Quality Assessment Report and Technical Note, by Enviros Consulting Limited, ref: 12553, dated April 2004	14 no. shallow boreholes, and 6 no. rotary boreholes into the Limestone aquifer/Alluvium for groundwater monitoring. Focused on an area within the western third of the current Assessment Site.
Disposal Area Two, HM Mooring Depot, Pembroke Dock, Combined Phase I and II Land Quality Assessment Report and Technical Note, by Enviros Consulting	3 no. shallow boreholes to max. 3.5 m bgl, and 2 no. rotary boreholes into the Limestone aquifer/Alluvium for groundwater monitoring. Focused on an area within the

Report title and date	Brief description
Limited, ref: 12553, dated April 2004	western third of the current Assessment Site.
Interim Phase I Letter Report, by Enviro Consulting Ltd, dated February 2005.	This desk-based report included a walkover of areas not covered by the above intrusive investigations. The findings were incorporated into this LQA Phase 1 report.
Foreshore Areas, HM Mooring Depot, Pembroke Dock, Combined Phase I and II Land Quality Assessment Report and Technical Note, by Enviro Consulting Limited, ref: 12553, dated July 2005	Focussed on areas of foreshore to the north and northwest of the Assessment Site (not within the current Assessment Site boundary). 4 no. sediment samples.

- 5.3.4 The report states that intrusive investigations, sampling, analysis of soil and groundwater samples and risk assessment was undertaken. Lead and hydrocarbons are stated to have been recorded in Made Ground above the assessment criteria of the time. Hydrocarbon and phenols are stated to have been identified in soil and shallow groundwater in the vicinity of former standby generator house fuel tanks. Tributyl tin was encountered in sediment samples from the ends of slipways. The two samples of sediment from the Timber Pond were found to contain elevated concentrations of metals (concentration not given).
- 5.3.5 A comment on radioactive materials was given and concluded that there is a low likelihood of radioactive contamination being present at the site. This is based on the previous military use of the site, and not on radiation from natural radon from underlying geology.
- 5.3.6 The report concluded that it was unlikely that there would be any significant environmental constraints to redevelopment for continued commercial/industrial use, provided the identified risks were appropriately managed and mitigated. Where hardstanding was proposed to be removed, limited remedial works were recommended. For a residential land use, remediation was recommended due to localised exceedances of the then current assessment criteria.

5.4 Land Quality Assessment Phase Two, Enviro Consulting Ltd, April 2007

- 5.4.1 This report details the following intrusive works which were undertaken in November 2006:
- 18 no. shallow rotary boreholes for soil sampling, max depth 3.0 m bgl (WS201-WS218),
 - 4 no. deeper boreholes for groundwater monitoring wells (BH201-BH204),
 - 6 no. rounds of gas and groundwater monitoring.
- 5.4.2 The report includes a plan of exploratory hole locations, a conceptual site model, exploratory hole logs with co-ordinates and elevations (plus borehole logs for Gibb 2001 and Enviro 2004), results of the gas and groundwater monitoring rounds, laboratory data for gas samples.

5.4.3 The ground conditions from the borehole logs provided in this report are summarised in the table below.

Table 5-2. Summary of Ground Conditions, as described in Enviro, 2007

Stratum	Description (as interpreted by Enviro Consulting Ltd, 2007)	Thickness, m	Depth to base, m bgl
Made Ground	Encountered in every exploratory hole. Various comprised hardstanding or limestone, silt, sandstone, clay, slate, brick, coal, slag, clinker, plastic, timber and metal fragments. Thickest at borehole BH202 in the west of the Assessment Site. Bituminous odour at BH6 (Enviro 2004). Concrete 2.0 m thick in BH11 (Enviro 2004).	0.55 to 7.9	0.55 to 7.9
Head Deposits	Soft red brown slightly sandy slightly gravelly clay with occasional cobbles. Gravel and cobbles are of limestone. Occasional sand lenses. Occasionally gravel.	1.2 to 4.05	2.3 to 9.2
Weathered limestone	Weathered grey limestone with clay bands	1.4	6.0
Limestone (bedrock)	Grey limestone	Unknown	Base unproven

5.4.4 This report stated that the investigation found seven locations where soil contamination was encountered, with regard to heavy metals and PAH above the assessment criteria of the time (Soil Guideline Values). Further assessment of the sediment sample data taken previously from the Timber Pond was undertaken and exceedances of the commercial assessment criteria for lead were noted. Six groundwater samples were taken and combined with previous groundwater data. Assessment found exceedances for heavy metals, other inorganics, TPH and PAH.

5.4.5 As per the previous report, this report concluded that it was unlikely that there would be any significant environmental constraints to redevelopment for continued commercial/industrial use, provided the identified risks were appropriately managed and mitigated. Where hardstanding was proposed to be removed, limited remedial works were recommended. For a residential land use, remediation was recommended due to localised exceedances of the then current assessment criteria.

5.5 Condition Survey Report, Atkins, December 2008

5.5.1 This report comprises the results of surveys of the condition of various aspects of the dock yard (walls, roads, drainage etc.). Generally the condition is reported to be good and recommendations are made in selected areas.

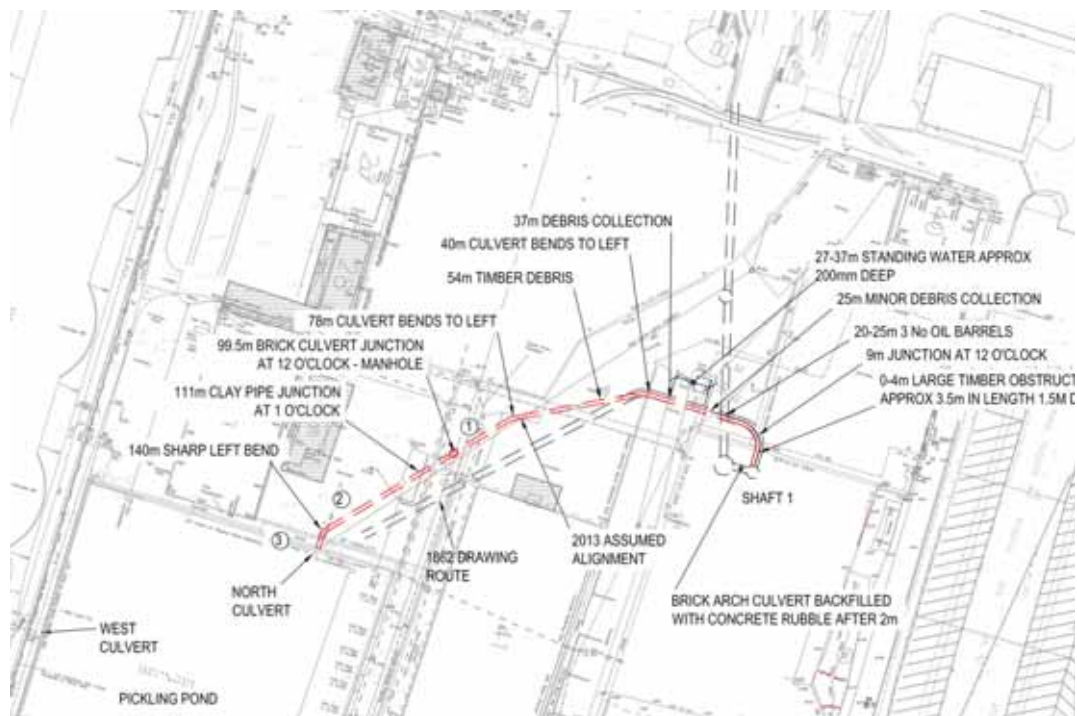
5.5.2 No information on ground conditions or potential for contamination is given and as such this report is not reviewed further.

5.6 Gate 4 Pickling Pond Culvert System, Preliminary Inspection Report, Atkins, June 2013

5.6.1 A survey of the two culverts from the Pickling Pond (also called Timber Pond) located on the southwest of the Assessment Site was undertaken in 2010, and updated by further survey work in 2013 following the discovery of additional access. These two culverts run; west to the estuary, and north to the graving dock. The full route to the graving dock has not been proven. The purpose of these culverts was to allow the saline water in the pond to be 'flushed' periodically.

5.6.2 With regards to potential contamination sources and/or pathways, the only information of note from this report is that 3 no. barrels of unknown contents were noted within the north culvert in 2013. These were located 20-25 m from the access chamber (labelled as Shaft 1 on Figure 5-1, image copied from report).

Figure 5-1: North culvert with location of 3 no. barrels noted (June 2013)



5.7 Gate 1 Preliminary Risk Assessment by RSK, March 2015

5.7.1 This Preliminary Risk Assessment (PRA) by RSK covers a specific sub-site only, 'Gate 1'. This is an area in the north-east of the Assessment Site, shown on Figure 5-2.

5.7.2 The objective of this report was to provide an indication of potential contamination issues and other ground related constraints within the site (the site being the Gate 1 area shown below). The report produces an initial conceptual site model which is used to assess potential risks to human health, the environment and potential environmental liabilities.

Figure 5-2: Gate 1 sub-site covered by RSK report (March 2015)



5.7.3 The report used available published data relating to geology and hydrogeology, historical maps, an environmental database report (Groundsure), risk from unexploded ordnance (UXO) and also included a site reconnaissance visit undertaken on 10th March 2015.

5.7.4 This visit observed a sand storage berth, open areas of hardstanding, a storage shed, site office, security hut, and several portable cabins in the Gate 1 sub-site. A bunded above-ground fuel storage tank (single-skinned) and a standalone fuel dispenser (un-bunded) were noted within the area. No hydrocarbon sheen was noted on water present within the tank bund, and no hydrocarbon staining was noted around the fuel dispenser. It was noted that the fuel

dispenser was in poor condition and located on gravel/soft cover. The recent site reconnaissance visit by RPS confirms that this tank is no longer present.

- 5.7.5 A vehicle wash-down area (and associated generator) was noted to the south-east of the Gate 1 sub-site, also outside of the site boundary were an electrical sub-station, further above-ground tanks and vehicle storage. The features noted during the visit are shown on the figure reproduced from the report. The surrounding land use was recorded to be commercial/light industrial, with residential areas to the south and east.
- 5.7.6 This report did not include a review any previous reports.
- 5.7.7 The potential risk from ground gas was considered by in this report to be moderate, based on CIRIA 665, due to the long commercial/industrial setting of the dock.
- 5.7.8 The PRA concluded that potential sources of contamination are present, including made ground, historical industrial activities, fuel storage and waste storage. The maximum risks given were moderate/low (for risks from ground gas/vapours to current/future site users), and moderate (to groundwater and surface waters from soil/groundwater contamination). The PRA recommended an intrusive investigation and also a detailed UXO desk study.

5.8 Phase I Ground Investigation, Quantum, April 2015

- 5.8.1 The Phase 1 Ground Investigation covers an area in the east of the current Assessment Site, previously referred to by others as 'Gate 1'.
- 5.8.2 The works were "to investigate and assess the ground conditions in preparation for infrastructure and buildings relating to the potential construction of a tidal lagoon power generation scheme".
- 5.8.3 The fieldwork undertaken by Quantum in March 2015 as reported in this April 2015 report, comprised rotary boreholes (BH1 to BH5) and trial pits (TP01 to TP19). Standard Penetration Testing was undertaken in the boreholes. The exploratory hole logs are given in an appendix to the report. Geotechnical and chemical laboratory testing were also reported.
- 5.8.4 A geophysical survey was undertaken and aimed to investigate the area for buried structures and possible solution features in the underlying limestone. The report concluded that a number of anomalies were encountered including historic rail lines (linear features) and anomalies which may warrant further investigation. The amount of hardstanding meant it was not possible to establish bedrock profiles (to look for solution features). The report recommended that seismic refraction and/or seismic cross hole surveys could be undertaken to give a more detailed analysis of bedrock depth, profiles and engineering properties.
- 5.8.5 The ground conditions from this investigation, as reported by Quantum, is summarised in Table 5-3.
- 5.8.6 Metamorphic rock was encountered in two boreholes. The report states that this interpretation has been made based on the very strong nature, mild foliation of minerals and occasional

nodules of pure quartzite mineralisation, and is interpreted to be sandstone which has undergone mild metamorphosis.

Table 5-3. Summary of Ground Conditions, as described in Quantum, 2015

Stratum	Description (as interpreted by Quantum, 2015)	Depth to base, m bgl
Made Ground (Granular)	Loose to medium dense, brown grey, sandy, fine to coarse gravel with frequent angular to sub-angular cobble and boulders including slag and clinker material and pieces of broken brick and metalwork.	0.0 to 2.0
Made Ground (Obstructions)	Sections of brick wall with mortar, limestone square-cut blockwork and metal work and rebar concrete obstructions encountered in a number of pits.	0.5 to 1.5
Made Ground (Cohesive)	Firm red brown, very gravelly clay with frequent to occasional angular to sub-angular cobbles.	1.0 to 3.0
Weathered limestone (bedrock)	Angular to sub-angular limestone cobbles and boulders.	0.65 to 4.0
Limestone (bedrock)	Strong to very strong, medium grey, fine grained limestone with fractures indicating in-situ weathering. Occasional occurrence of calcite mineralisation within rock mass. Occasional occurrence of clay mineralisation along fracture planes.	Base unproven
Metamorphic (bedrock)	Very strong, medium yellow brown, thinly to thickly laminated, medium grained metamorphic rock with discolouration weathering and occasional occurrence of quartzite mineralisation nodules. BH1 and BH2 only.	7.6 to 8.9

5.8.7 Risks to human health and controlled waters were assessed. The risk to future site users and construction workers was considered to be low. The risk to controlled waters was considered tentatively to be low. A geotechnical engineering appraisal was also undertaken.

5.8.8 The conclusions and recommendations given in the report include:

- Made Ground in this area is unsuitable for founding structures on (the material could be regraded to form an engineered fill),
- a design sulphate class of DS-2/AC-2 should be used for concrete,
- plate load testing would be required if engineered fill is to be used, and
- soil leachate testing may be required to determine the risk from Made Ground to controlled waters.

5.9 Geotechnical Desk Study, Royal Haskoning DHV, November 2015

- 5.9.1 This report covers three sub-sites; Gate 1, Gate 4 and Millforge. The locations of these areas are shown on Figure 5-3. It should be noted that the Gate 1 area in this report is smaller than that labelled Gate 1 in the RSK report reviewed in Section 5.2 above.
- 5.9.2 The objectives of the report are to identify potential contamination sources and risks to human health/the environment, to identify geological features and to assess potential geotechnical risks to future development.
- 5.9.3 The Gate 1 sub-site is described as comprising “a large concrete hardstanding pad approximately 100 m by 70 m. Currently unused (at the time of Royal Haskonings’ site reconnaissance visit), the site lies in the southeast corner of the Pembroke Dock and is surrounded by roadways and commercial/industrial land use”. The Gate 4 sub-site is described as comprising “an area of quayside including a dry dock and slipways, with a commercial/industrial building immediately to the south”. The Millforge sub-site described as comprising “an area of semi-derelict land with a large warehouse/garage and rough scrub and some mature trees. The site lies in the southwestern area of the Pembroke Dock and is bounded to the north by commercial/industrial land use and to the south by a roadway with South Pembrokeshire Hospital beyond”.
- 5.9.4 RPS observed conditions which were broadly very similar to the above during the recent site reconnaissance visit.

Figure 5-3: Sub-sites covered by Royal Haskoning report (Nov 2015)



- 5.9.5 The report considers that potential sources of contamination are present and the following potential contaminants of concern are identified; hydrocarbons, PAHs, heavy metals, sulphates, creosote, ammonia, asbestos, solvents, PCBs and organo-tin compounds. The report separates the potential sources into the three areas considered however they have been combined for ease of reference in this report. Risks from ground gas and ordnance are also considered possible.
- 5.9.6 Potential receptors considered include human health (construction/maintenance workers, future site users and adjacent site users), controlled waters, water supply pipes, and buildings and infrastructure. Potential pathways considered include direct contact, inhalation, explosive risk, infiltration/leaching/migration and chemical attack.
- 5.9.7 The reported risks posed to the various receptors are given below (combined for the three sub-sites for ease of reference):
- Human health - Low to Moderate
 - Buildings & infrastructure – Low to Moderate
 - Controlled waters – Low to Moderate
- 5.9.8 The following reports are discussed in the Geotechnical Desk Study report. A plan showing the locations of the exploratory holes advanced as part of each of the intrusive investigations is given in an appendix. RPS has not had sight of some of the reports.

Table 5-4. Reports reviewed by Royal Haskoning in Geotechnical Desk Study, 2015.

Report title and date	Brief description
Pembroke Dock Ro-Ro Terminal Development Factual and Interpretative Report, ref: 65014-1 by Fugro, March 1996	16 no. cable percussive and rotary core boreholes to max. 25 m below ground level (bgl). 77 no. geoprobes to max. 5 m bgl. 7 no. grab samples. Where shown on the plan provided, these boreholes appear to all be offshore.
Gibb Environmental (2001) – full title not known	11 no. boreholes to max. 6 m bgl.
Enviros (September 2003) – full title not known	20 no. boreholes to max. 13 m bgl.
Enviros (November 2006) – full title not known, believed to possibly be Enviros 2007 report	4 no. boreholes to max. 10 m bgl. 3 no. window sampler boreholes to max. 3 m bgl. (<i>Discussed in Section 5.4 above</i>)
Pembroke Dock Ex-RMAS Site, 2020 Condition Survey Report ref: 5056549-2/DG01-3 by Atkins, 2008	Included Gibb (2001), Enviros (2003) and Enviros (2006) as appendices. (<i>Discussed in Section 5.5 above</i>)
Pembroke Dock Port, Phase 1 Ground Investigation Interpretative Report, ref: G624/IR by Quantum Geotechnics, March 2015	20 no. trial pits to max. 4 m bgl. 4 no. rotary core boreholes to max. 20 m bgl. Geophysical survey. (<i>Discussed in Section 5.8 above</i>)

5.9.9 The ground conditions from the above reports, as reported by Royal Haskoning, is summarised in the table below.

Table 5-5. Summary of Ground Conditions, as described by Royal Haskoning, 2015

Stratum	Description (as interpreted by Royal Haskoning, 2015)	Thickness m	Depth to base, m bgl
Made Ground	Encountered in every exploratory hole (on-shore). Variously comprised limestone, silt, clay, slate, brick, slag, clinker, plastic, timber and metal fragments. Thickest at borehole 4-BH202 in the west of the Assessment Site (Enviros 2006).	1 to 8	1 to 8
Tidal Flat Deposits (superficial)	These have been encountered off-shore to the north of the Assessment Site where they comprised very soft to firm silty or sandy clays to clayey or silty gravels. Where gravels are present, these are weathered mudstone and limestone.	0.5 to 2.8 (off-site)	0.5 to 2.8 (off-site)
Possible Marine Sediments	Comprising very soft silty clays to clayey sands and sandy gravels. Encountered in west of Assessment Site.	Up to 6	Unknown

Stratum	Description (as interpreted by Royal Haskoning, 2015)	Thickness m	Depth to base, m bgl
Weathered limestone	Interpreted as a karstic (dissolution) feature. Present in the east of the Assessment Site, at borehole 5-BH5 (Quantum, 2015). Comprising angular limestone gravel.	Unknown	20
Limestone (bedrock)	Often weathered at upper boundary. Occasional mudstone and siltstone layers. In the east, it is recorded as interlayered with metamorphosed rocks up to 2.5 m thick where proven. Off-shore boreholes recorded bedrock as mudstone.	Unknown	Base unproven

5.9.10 A preliminary assessment for the risks from unexploded ordnance (UXO) was undertaken by Zetica Ltd; this concluded that there was a high risk from UXO.

5.9.11 Data from the above reports form the basis of the geotechnical risk assessment, which is presented as a geotechnical risk register in an appendix. This assessment recommended an intrusive ground investigation to quantify and classify deposits, and also to determine the depth to rock head. Other recommendations included a geophysical survey to assess the level of rock head around the developments (including offshore), undertake strength and compressibility testing of the soft cohesive deposits, procure a detailed UXO desk study and further investigation and consultation to establish appropriate methods for detecting voids within the limestone bedrock.

5.9.12 In addition to the geotechnical recommendations, geo-environmental recommendations were made. These comprised; an intrusive ground investigation to collect soil samples for analysis and assessment for risk to human health and from aggressive ground conditions (risks to concrete etc.), installation and subsequent monitoring of ground gas wells for risk to human health and buildings, installation of groundwater monitoring wells and subsequent collection of groundwater samples and assessment of risks to controlled waters, and waste assessment for materials tipped at Milforge (it is understood that a waste assessment has since been undertaken, see Section 5.12).

5.10 UXO Desk Study & Risk Assessment, Zetica Ltd, December 2015

5.10.1 Zetica Limited undertook a UXO Desk Study & Risk Assessment which covered the whole Assessment Site.

5.10.2 This found the risk from unexploded ordnance (UXO) to vary depending on location within the site; moderate risk in the northeast and southeast corners, low risk in the remaining areas. It

was considered unlikely that any unexploded ordnance would have gone unnoticed as it was an operational military base during WWII.

Figure 5-4: UXO risk from low to moderate as reported by Zetica Ltd (2015)



5.11 Ground Investigation Factual Report, Quantum Geotechnical, June 2016

5.11.1 This report from Quantum comprises a factual report only and relates to fieldwork undertaken between 29th January and 18th March 2016. The areas investigated were Gate 1, Gate 4 and Milforge. Additional areas were investigated at another dock as part of this report (Milford Haven) however this area is not part of the Assessment Site considered in this report.

5.11.2 The fieldwork (at Pembroke dock only) comprised the following:

- 11 no. boreholes (BH701 to 706, BH801-802, BH901-903) by dynamic and rotary methods, to between 10 and 16.5 m bgl,
- 20. No TPs (TP701-706, TP901-913) to between 1.3 and 4.8 m bgl,
- 19. No HPs (HP901-919) from spoil heaps at Milforge sub-site,
- 5 no. gas/groundwater monitoring installations plus 2 no. rounds of monitoring,

- Chemical analysis suite including asbestos (soils only), ammoniacal nitrogen, phenol, cyanide, heavy metals, TPH, PAH, and VOC, and
- Geotechnical testing on selected soil samples.

5.11.3 The report includes exploratory hole logs with co-ordinates and elevations, geophysical survey report, results of the gas and groundwater monitoring rounds, laboratory data (geotechnical and geo-environmental).

5.12 Ground Investigation Report, Royal Haskoning DHV, August 2016

5.12.1 The Ground Investigation Report by Royal Haskoning (August 2016) considers four discrete sub-sites; Gate 1, Gate 4, Silo Site and Milforge. The locations of these areas are shown on Figure 5-5. It should be noted that the Gate 1 area in this report is smaller than that labelled Gate 1 in the RSK report reviewed in Section 5.7 above, and similar to that considered in the Royal Haskoning report reviewed in Section 5.9. The Silo Site is within the larger Gate 1 area considered by RSK. It should also be noted that the Gate 4 area is smaller than the area labelled as Gate 4 in the Royal Haskoning report from 2015 (Section 5.9).

5.12.2 The purpose of the report is to summarise the findings of a ground investigation, to establish a ground model, to propose geotechnical design parameters for preliminary design and assess the geo-environmental risks posed by potential contamination at each of the redevelopment sub-sites.

Figure 5-5: Sub-sites covered by Royal Haskoning report (August 2016)



5.12.3 Table 5-6 presents reports used for Royal Haskoning Ground Investigation Report (2016).

Table 5-6. Reports reviewed by Royal Haskoning Ground Investigation Report, 2016.

Report title and date	Brief description
Gibb Environmental (2000) – full title not known	8 no. boreholes to unknown depth.
Enviros (September 2003) – full title not known	20 no. boreholes to max. 13 m bgl.
Enviros (November 2006) – full title not known	4 no. boreholes to max. 10 m bgl. 3 no. window sampler boreholes to max. 3 m bgl.
Pembroke Dock Ex-RMAS Site, 2020 Condition Survey Report ref: 5056549-2/DG01-3 by Atkins, 2008	Included Gibb (2001), Enviros (2003) and Enviros (2006) as appendices.
Pembroke Dock Geotechnical Desk Study, Desk Study, by Royal Haskoning DHV on behalf of Milford Haven Port Authority, ref: PB4337R002, rev. 01/Final, 13 Nov 2015. <i>(Detailed above in Section 5.8)</i>	Desk study assessing geo-environmental and geotechnical risks to future development.
Pembroke Dock Port, Phase 1 Ground Investigation Interpretative Report, ref: G624/IR by Quantum Geotechnics, March 2015	20 no. trial pits to max. 4 m bgl. 4 no. rotary core boreholes to max. 20 m bgl. Geophysical survey.
Ground Investigation Factual Report for Milford Haven and Pembroke Dock, ref: G778/FR by Quantum Geotechnics, 2016. <i>(Detailed above in Section 5.11.)</i>	11 no. dynamic and rotary boreholes to max depth 16.5 m bgl. 20 no. trial pits to max depth 4.8 m bgl. 19 no. hand excavated samples from spoil heaps (Milforge Site).
Milforge Lorry Park Extension Spoil, Waste Classification Assessment, by Royal Haskoning DHV, ref: PB4337/N003, 2016	A waste assessment for spoil heaps at Milforge Site which concluded hazardous classification. Report not seen by RPS. Reason for hazardous classification unknown. RPS site reconnaissance visit and discussions with site staff confirms spoil heaps are still onsite.

5.12.4 Geological cross-sections, utilising data from some of the above reports, are given in Appendix A of this Royal Haskoning report, where the soils and rock units are given numbered designations, as used in the table below. The key to the numbering is given in Table 7-1 to Table 7-4, in their Ground Conditions section.

5.12.5 Geotechnical parameters were defined and the aggressivity to concrete was assessed. With regard to aggressivity, a design sulphate class of DS-1/AC-1 was given for the majority of the sub-sites, with further testing recommended for the Milforge sub-site.

5.12.6 The ground conditioned noted for each sub-site have been combined into Table 5-7 below.

Table 5-7. Summary of Ground Conditions, as described by Royal Haskoning, 2016

Stratum	Description (Royal Haskoning, 2016)	Thickness, m	Depth to base, m bgl
Made Ground ('Soil Unit 1' (granular) and 'Soil Unit 2' (cohesive))	Variable "Loose to very dense slightly sandy, slight silty or clayey to silty or clayey fine to coarse sub-angular to angular gravel with frequent man-made objects" or "Soft to firm slightly sandy slightly gravelly to gravelly sometimes silty clay with frequent man-made objects"	0 to 7.0 0 to 4.5	Un-defined
Superficial deposits ('Soil Unit 3' (granular) & 'Soil Unit 4' (cohesive))	"Slightly clayey to clayey slightly sandy to sandy fine to coarse sub-angular to angular GRAVEL" or "Soft to firm slightly sandy slightly gravelly to gravelly CLAY" *Granular superficial deposits (limestone gravel) recorded in BH901 up to 9 m thick, possible solution feature	0 to 2.5* 0 to 4.3	Un-defined
Mudstone (bedrock) ('Rock Unit 1')	"Highly to moderately weathered very weak to moderately strong MUDSTONE"	0 to 2.3	Un-defined
Mudstone (bedrock) ('Rock Unit 2')	"Slightly weathered to fresh, moderately strong to very strong thinly to medium bedded MUDSTONE"	0 to 4.3 (thickness not proven)	Un-defined
Sandstone ('Rock Unit 3')	"Moderately to highly weathered, moderately weak coarse grained SANDSTONE" <i>Recorded in one location only.</i>	0 to 0.75	Un-defined
Weathered limestone (bedrock) ('Rock Unit 4A')	"Highly to moderately weathered very weak to strong LIMESTONE. Often highly fractured or recovered non-intact with zones of assumed core loss"	0 to 12.2 (thickness not proven)	Un-defined
Limestone (bedrock) ('Rock Unit 4B')	"Moderately strong to very strong fractured, medium to thickly bedded LIMESTONE"	>7.3 (thickness not proven)	Base unproven

5.12.7 Observations of potential contamination included presence of demolition material, a hydrocarbon odour noted in soils and a solvent odour noted in soils (all at the Milforge sub-site). No free phase hydrocarbons were recorded.

- 5.12.8 The geo-environmental risk assessment utilises chemical data from two reports (Quantum, 2015 & Quantum, 2016). The data is summarised in a table in their Appendix B. Commercial land use Generic Assessment Criteria (GACs) and C4SLs plus CLEA-model derived criteria were used to make the assessment.
- 5.12.9 The geo-environmental risk assessment found exceedances against the criteria for beryllium (1 no. sample from trial pit TP704 at 2.1 m bgl), PAH/SVOC (1 no. sample from trial pit TP902 at 3.0 m bgl), plus positive detects for a number of contaminants including PCBs. PCBs were detected above the laboratory limit of detection (LOD) in samples from borehole BH801, borehole BH802 (marginal) and from trial pit TP902 (marginal). Further assessment with respect to PCBs was recommended.
- 5.12.10 Asbestos was recorded in 16 out of 73 samples analysed. This was detected as loose fibres, insulation lagging and woven product (rope). Quantification testing found asbestos in all samples to be below the LOD.
- 5.12.11 A controlled waters assessment was undertaken which used leachability data (from 2016 Quantum investigation) and Environmental Quality Standards (EQS). This controlled waters assessment did not include the Gate 4 area as it was considered to be in connection with the estuary water. In other areas, the underlying principal aquifer was considered to be the main receptor (drinking water standards and freshwater standards were used).
- 5.12.12 Exceedances of the controlled waters assessment criteria were recorded for lead (in a sample from a trial pit in the Gate 1 sub-site, and in 2 no. samples from boreholes in the Milforge sub-site), copper (in all 5 no. borehole samples from the Milforge sub-site). The controlled waters assessment concluded that the contamination at the sub-sites included is unlikely to cause an unacceptable risk.
- 5.12.13 A gas risk assessment was undertaken, based on monitoring from 2 no. boreholes at Gate 1 sub-site, 1 no. borehole at Gate 4 sub-site and 2 no. boreholes at Milforge sub-site. 2 no. monitoring rounds were undertaken. The maximum recorded results were; maximum methane 0.1%, maximum CO₂ 7.0%, maximum CO 13ppm, maximum H₂S 0 ppm, maximum flow 0.4 l/hr.
- 5.12.14 The worst case assessment found the sites included the assessment conform to Characteristic Situation CS2 (due to elevated concentrations of CO₂). Royal Haskoning recommend further gas monitoring in their report. In addition to the above gas risk, protection measures for radon gas are also likely to be required.

5.13 Summary of Source of Contamination by Area

- 5.13.1 The Draft Masterplan (*Drawing JPW1115-04*) shows that new buildings are proposed; in the northwest (including infilling of the graving dock), in the southwest (including infilling of Timber Pond) and in Milforge Site. Additionally, it is shown that an area between Slipway 1 and Slipway

2 will be infilled. The relevant contamination sources, and associated reports/investigations, in these areas of development are given below.

North West Area/Graving Dock

- 5.13.2 Historical maps show the following potential sources of contamination in this area: coal bin and oil tanks (immediately off-site to the west).
- 5.13.3 In addition to these potential sources, the following were noted during the site reconnaissance visit in this area: paint store, scrap yard and garage (on land not owned by MHPA), and an electricity sub-station.
- 5.13.4 An investigation by Quantum, discussed in Section 5.11 (*Ref. 12*), included two boreholes in the area around the Graving Dock. Chemical laboratory analysis certificates are included, for samples from these boreholes, in the report reviewed by RPS. Asbestos, tin, TPH and PAH are notable contaminants present in the analysis.
- 5.13.5 As discussed in Section 5.12 (*Ref. 14*), a previous geo-environmental risk assessment reported positive detects for a number of contaminants including asbestos and PCBs. Further assessment with respect to PCBs was recommended to fully understand the risks to human health and controlled waters from PCBs.
- 5.13.6 Risks to controlled waters were also assessed as part of a previous investigation (*Ref. 14*). This concluded that, while exceedances of the assessment criteria were recorded for lead, it is unlikely that there is an unacceptable risk to identified controlled water receptors.

Slipway Infilling

- 5.13.7 The interview with site staff indicated that during repairs to Slipway 1, evidence of oil contamination was observed below the slipway slabs. This is possibly related to the Sea Empress oil spill, in 1996, which occurred in the Milford Haven Estuary adjacent to the Assessment Site.
- 5.13.8 According to the Enviro report discussed in Section 5.3 (*Ref. 9*), Tributyl tin and other metals were encountered in sediment samples from the ends of slipways. Previous investigations in this area include an investigation by Enviro (see Section 5.4); however where the chemical laboratory data should be in the appendix, this is absent in the version reviewed by RPS. No other reports reviewed by RPS give any original chemical data for this area.

South West/Timber Pond

- 5.13.9 Historical maps show the following potential sources of contamination in this area: tar tank, gas works (immediately off-site to the south), oil tanks (immediately off-site to the west), sediment in Timber Pond, electricity sub-station and coal silos.
- 5.13.10 In addition to these potential sources, the following were noted during the site reconnaissance visit in this area: fuelling point and a burnt area of grass.

5.13.11 Previous investigations in this area include an investigation by Enviro (Section 5.4); however where the chemical laboratory data should be in the appendix, this is absent in the version reviewed by RPS. No other reports reviewed by RPS give any original chemical data for this area.

Milforge Site

5.13.12 The site reconnaissance visit, and previous reports, noted demolition material in this area including asphalt and concrete.

5.13.13 Historically, this area has been used as paddocks, gardens and tennis courts.

5.13.14 An investigation by Quantum, discussed in Section 5.11 (*Ref. 12*), included boreholes, trial pits and hand dug pits in this area. Chemical laboratory analysis certificates are included, for samples from these exploratory locations, in the report reviewed by RPS. Asbestos, tin, TPH and PAH are notable contaminants present in the analysis.

5.13.15 As discussed in Section 5.12 (*Ref. 14*), a previous investigation reported the demolition material present to include asbestos and to be of hazardous waste classification (although as discussed the reason is not given). During the investigation discussed in Section 5.12, observations of contamination included a hydrocarbon odour and a solvent odour noted in soils in the Milforge Site. The previous geo-environmental risk assessment (*Ref. 14*) reported exceedances against the commercial land use criteria for PAH/SVOC (1 no. sample from trial pit TP902 at 3.0 m bgl), plus positive detects for a number of contaminants including PCBs.

5.13.16 Risks to controlled waters were also assessed as part of a previous investigation (*Ref. 14*). This concluded that, while exceedances of the assessment criteria were recorded for copper and lead, it is unlikely that there is an unacceptable risk to identified controlled water receptors.

Gaps in ground investigation data

5.13.17 All but 2 no. of the reports which have been made available to RPS contain only summary tables of chemical analysis (soil) data, without original laboratory certificates reconciling specific data to specific locations/depths. The 2 no. reports which include full laboratory certificates for the chemical soil testing are:

- Phase I Ground Investigation Interpretative Report, Pembroke Dock Port, by Quantum Geotechnical on behalf of Milford Haven Port Authority, ref: G624/IR, dated April 2015 (*Ref. 11*); and
- Milford & Pembroke Docks, Ground Investigation Factual Report, by Quantum Geotechnical Ltd on behalf of Milford Haven Port Authority, ref: G778/FR, rev 1, dated June 2016 (*Ref. 12*).

5.13.18 Of the above, the first report listed covers the Gate 1 area only i.e. an area where no significant development is proposed. The second report listed above includes ground investigation in the

Milforge Site area plus two boreholes in the slipway infill area. No investigation was carried out in the southwest as part of this investigation.

- 5.13.19 Groundwater data is absent from for all areas to be developed, and gas data is absent for some of the areas to be developed.
- 5.13.20 There have been recommendations for further testing and assessment for some contaminants, as concluded in some of the previous reports, for example PCBs. It is also noted that given the dates of some of the earlier reports, it is likely that the data may no longer be able to be relied on in order to provide a suitable assessment as part of a planning application.
- 5.13.21 A full scoping exercise should be carried out to develop a programme of further intrusive investigation.

6 Conceptual Site Model and Preliminary Risk Assessment

6.1 General

- 6.1.1 Information from the previous sections has been used to form the Conceptual Site Model (CSM) and Preliminary risk Assessment (PRA) below.
- 6.1.2 In line with CLR-11 guidance (*Ref. 7*), a CSM and PRA have been developed to qualitatively assess potential contaminant sources, receptors and potential pollutant linkages identified at the Assessment Site. The risk level relevant to each linkage is stated in the context of potential risk to future site users based on the proposed continued commercial use, as well as controlled water receptors.

6.2 Site Conceptual Model

- 6.2.1 The general ground conditions at the Assessment Site comprise Made Ground over superficial Head Deposits (where present), Mudstone (where present) overlying weathered limestone and competent limestone bedrock.
- 6.2.2 Previous intrusive and desk-based investigations have been carried out. Where these have included risk assessments, these have been assessed against commercial land use human health criteria, and have concluded that the site is generally suitable for continued commercial land use.
- 6.2.3 Historical and current sources of contamination are present in the areas of proposed development, as per the masterplan *Drawing JPW1115-04*. These are set out by area in Section 5.13 and in the section below.
- 6.2.4 Whilst there is significant amount of information available from the previous assessments there are areas of the Assessment Site for which data is not available. This primarily relates to the central part of southern Assessment Site area and the eastern part of the northern Assessment Site area. Whilst these areas have been investigated and reported on by Enviro in 2004, the reports and associated data is not available.

6.3 Preliminary Risk Assessment

Potential Contamination Sources

- 6.3.1 The following potential contamination sources at the Assessment Site have been identified:
- Chemical contamination associated with the current on-site uses including storage of fuel oil, scrap yard, presence of electrical sub-stations Made Ground and spoil heaps (potential hydrocarbons, PCBs and asbestos contamination);

- Chemical contamination associated with the historical use of the Assessment Site (including military usage), including localised tanks, railway lines, electrical sub-stations, car dealers/breakers, manufacturing/engineering (potential hydrocarbons, solvents, PCBs, heavy metals, ground gas/vapours and asbestos contamination);
- Chemical contamination associated with historical off-site gas works and Depot feature to the south (potential ground gas/vapours to migrate to Assessment Site);
- Chemical contamination of shallow/perched groundwater (potential cyanide, hydrocarbons, solvents, PCBs, heavy metals and vapours); and
- Fuel contamination associated with the Sea Empress oil spill, in 1996, which occurred in the Milford Haven Estuary adjacent to the Assessment Site. The interview with site staff indicated that during repairs to Slipway 1, evidence of oil contamination was observed below the slipway slabs.

6.3.2 The risk assessment is based on a proposed future commercial use of the Assessment Site. **Table 6-1** presents Sources, Pathways and Receptors used in this context. Should a different land use be proposed, this CSM and PRA should be reassessed.

Table 6-1 Summary of Pollutant (Source-Pathway-Receptor) Linkages

Source	Pathway	Receptor	Risk	Notes
Chemical contamination associated with the current continued on-site uses including storage of fuel oil, scrap yard and presence of electrical sub-stations (potential hydrocarbons and PCBs)	Ingestion and dermal contact of soil; Inhalation of dust/asbestos fibres	Future Site Users; Construction workers	Low to medium	Current onsite activities are broadly well managed (no staining around tanks, tanks are of modern construction and double-skinned) with the possible exception of the scrap yard/garage where oil sheens were observed on bare ground outside. No data is available for this area around the 'triangle' and as such the risk from soils in these areas is unknown (presumed medium, in the absence of site-specific data). Further intrusive investigation is recommended where there are data gaps in areas of proposed development. The potential for these contamination pathways to be present to future users is limited due to the minimal soft standing present. Risks to construction workers can be mitigated by appropriate PPE.
	Inhalation of ground gas/vapours		Low	The current activities have the potential to give rise to hydrocarbon vapours in soils/groundwater which could migrate into buildings and therefore gas monitoring is recommended in areas where buildings are proposed. The limited ground gas monitoring data to date indicates that the Assessment Site conforms to CS2, meaning that gas protection measures are required. Radon protection measures are also likely to be required. Once gas protection has been adopted, the risk is considered to be low. Further intrusive investigation is recommended where there are data gaps in areas of proposed development
	Direct contact of aggressive ground conditions	Buildings, structures, water pipes	Low to medium	Current activities may have given rise to hydrocarbons in soils/groundwater which could contribute to aggressive conditions. Further testing in specific areas is recommended (risk is presumed medium in the absence of site-specific data). Various reports have assessed the aggressivity to concrete in Gate 1 area to be between DS-1 and DC-2. Where hydrocarbons are elevated, these pose a risk to concrete and to water pipes. Further intrusive investigation is recommended where there are data gaps in areas of proposed development

Source	Pathway	Receptor	Risk	Notes
	Leaching; Migration of contaminated groundwater	Deep groundwater and surface waters	Low to medium	Hardstanding at the Assessment Site limits infiltration however drains in poor repair may be present. Previous assessment (Ref. 14) has concluded that the risk to controlled water is unlikely to be unacceptable. No data is available for parts of the Assessment Site (risk is presumed medium in the absence of site-specific data). Further intrusive investigation is recommended where there are data gaps in areas of proposed development
Chemical contamination associated with the historical use of the Assessment Site, including localised tanks, railway lines, electrical sub-stations, car dealers/breakers, manufacturing/engineering (potential hydrocarbons, solvents, PCBs, heavy metals, ground gas/vapours and asbestos contamination);	Ingestion and dermal contact of soil; Inhalation of dust/asbestos fibres	Future Site Users; Construction workers	Low to medium	Previous risk assessments have indicated that the concentrations of contaminants in soils were below commercial land use thresholds, at the time. Providing that areas of soft landscaping remain minimal, the presumed risk is considered to be low, for commercial land use. Clean cover soils may be required where soft landscaping is present, to prevent direct contact. Standard precautions should be taken during construction works, plus asbestos control measures where relevant. No data is available for parts of the Assessment Site (risk is presumed medium in the absence of site-specific data). Further intrusive investigation is recommended where there are data gaps in areas of proposed development. The potential for these contamination pathways to be present to future users is limited due to the minimal soft standing present. Risks to construction workers can be mitigated by appropriate PPE a strict personal hygiene regime to avoid skin contact/ingestion.
	Inhalation of ground gas/vapours		Low	The current activities have the potential to give rise to hydrocarbon vapours in soils/groundwater which could migrate into buildings and therefore gas monitoring is recommended in areas where buildings are proposed. The limited ground gas monitoring data to date indicates that the Assessment Site conforms to CS2, meaning that gas protection measures are required. Radon protection measures are required. Once gas protection has been adopted, the risk is considered to be low. Further intrusive investigation is recommended where there are data gaps in areas of proposed development

Source	Pathway	Receptor	Risk	Notes
	Direct contact of aggressive ground conditions; Migration of gas/vapour into confined spaces (explosion/fire risk)	Buildings, structures, water pipes	Low to medium	Various reports have assessed the aggressiveness to concrete in Gate 1 area to be between DS-1 and DC-2. Further testing at the Milforge sub-site was recommended by Royal Haskoning. No data is available for parts of the Assessment Site and therefore further assessment is recommended (risk is presumed medium in the absence of site-specific data). Where hydrocarbons are elevated in soils/shallow groundwater, these pose a risk to concrete and to water pipes.
	Leaching; Migration of contaminated groundwater	Deep groundwater and surface waters	Low to medium	Hardstanding at the Assessment Site limits infiltration however drains in poor repair may be present. Previous assessment (Ref. 14) has concluded that the risk to controlled water is unlikely to be unacceptable. No data is available for parts of the Assessment Site (risk is presumed medium in the absence of site-specific data). Further intrusive investigation is recommended where there are data gaps in areas of proposed development
Chemical contamination associated with historical off-site gas works and sewage works, and Depot feature to the south (potential for ground gas/vapours to migrate to Assessment Site)	Inhalation of ground gas/vapours	Future Site Users; Construction workers	Low	The limited ground gas monitoring data to date indicates that the Assessment Site conforms to CS2, meaning that gas protection measures are required. In addition, radon protection measures are required. Organic vapours present a risk and as such any gas protection measures should take this into account.
	Migration of gas/vapour into confined spaces (explosion/fire risk)	Buildings, structures, water pipes	Low	Once typical gas protection measures have been adopted the risk is considered to be low. Further intrusive investigation is recommended where there are data gaps in areas of proposed development.

Source	Pathway	Receptor	Risk	Notes
<p>Chemical contamination of shallow/perched groundwater (potential cyanide, hydrocarbons, solvents, PCBs, heavy metals and vapours).</p>	<p>Leaching; Migration of contaminated groundwater</p>	<p>Deep groundwater and surface waters</p>	<p>Low to medium</p>	<p>Previous assessment (Ref. 14) has concluded that the risk to controlled water is unlikely to be unacceptable. No data is available for parts of the Assessment Site (risk is presumed medium in the absence of site-specific data). Further intrusive investigation is recommended where there are data gaps in areas of proposed development.</p>

7 Conclusions

- 7.1.1 RPS was commissioned by Milford Haven Port Authority to undertake a Phase 1 Desktop Study (DTS) and Preliminary Risk Assessment (PRA) report to support the Outline Planning Application for the Pembroke Dock Marine Development.
- 7.1.2 The proposed redevelopment of the Assessment Site comprises the creation of transport corridors, open-air lay down areas, increased dockside space and buildings for a variety of engineering purposes. The proposed design includes infilling of a graving dock and timber pond, and widening of a slipway.
- 7.1.3 Previous reports provided by the Client have been reviewed and summarised as part of this assessment.
- 7.1.4 RPS undertook a site reconnaissance visit as part of this report. An annotated plan and photographs are provided.
- 7.1.5 Potential contamination sources at the Assessment Site have been identified including current on-site uses of fuel oil storage, use as a scrap yard, presence of electrical sub-stations and spoil heaps (potential hydrocarbons, PCBs and asbestos contamination), historical use including localised tanks, railway lines, electrical sub-stations, car dealers/breakers, manufacturing/engineering (potential hydrocarbons, solvents, PCBs, heavy metals, ground gas/vapours and asbestos contamination), historical off-site gas works and Depot feature to the south (potential ground gas/vapours to migrate to Assessment Site), chemical contamination of shallow/perched groundwater and current off-site sewage works (potential cyanide, hydrocarbons, solvents, PCBs, heavy metals, gases and vapours). A loss of fuel in the Milford Haven Estuary (Sea Empress in 1996) may also be a source of hydrocarbons in coastal sediments.
- 7.1.6 A preliminary risk assessment based on a proposed future commercial use of the Assessment Site has been carried out. It is considered that the maximum risk is low to medium, for risks to human health from chemical contamination of soils/groundwater and ground gas. It is considered that the maximum risk is low to medium, for risks to buildings and structures from aggressive ground conditions and potential explosion/fire risk from ground gas. It is considered that the maximum risk is low to medium, for risks to controlled waters. The risk from UXO is considered to be low in the areas of proposed development.
- 7.1.7 Current data is not available for all parts of the Assessment Site which are proposed to be developed. Whilst some of the available data is relatively old (2006) it is considered that it is likely to have characterised the historical contamination sources and contaminating activities at the Assessment Site. It is therefore recommended that further targeted intrusive investigation is undertaken in the specific areas of the Assessment not previously characterised and that the existing data is reassessed against current standards to confirm the need for mitigation with respects to contamination at the Assessment Site. Such investigation would also allow the

geotechnical risks associated the potential presence of Running sands and solution features in the limestone bedrock to be refined for the areas investigated.

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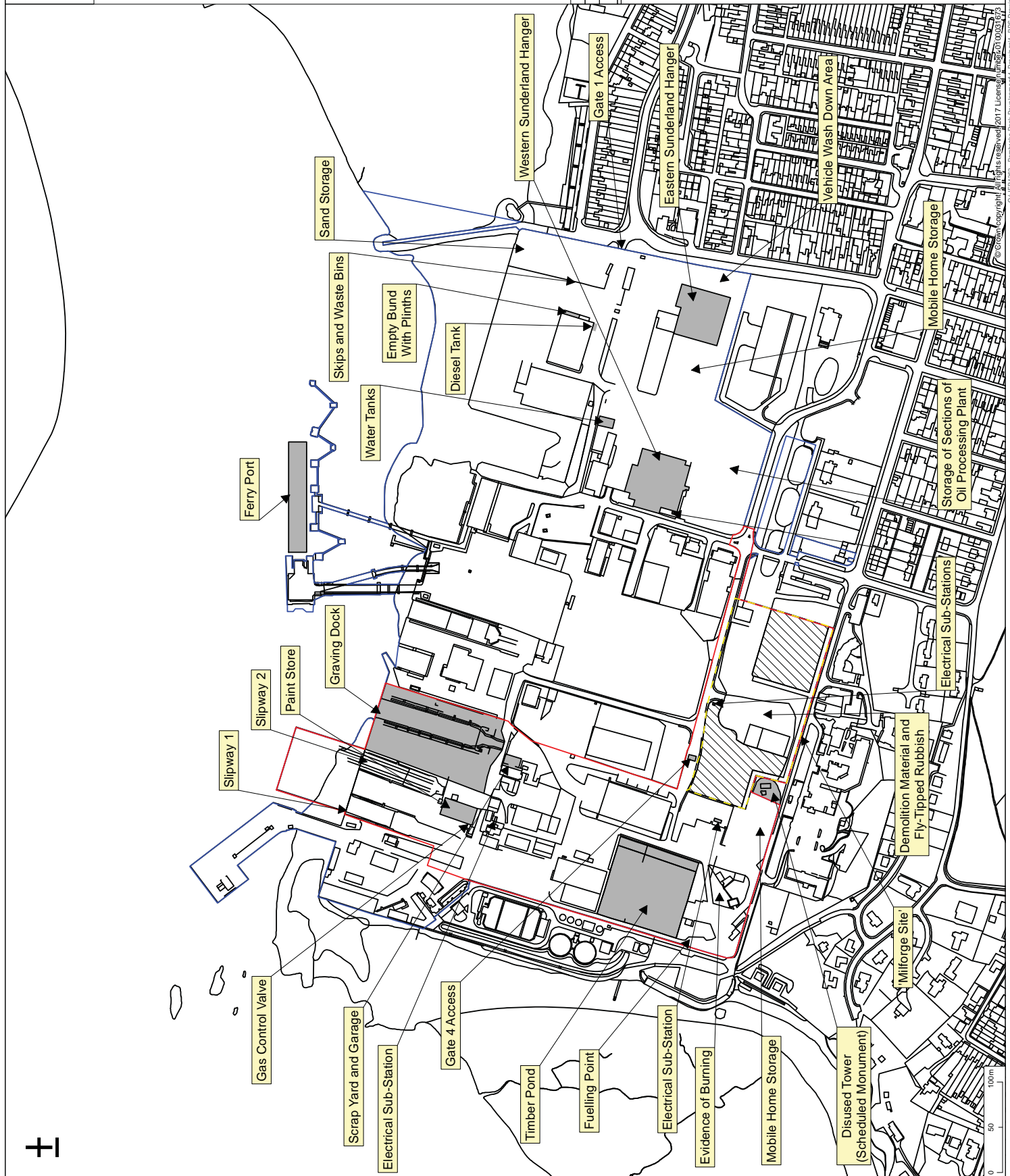
Drawings

Notes
 This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
 It is issued electronically and the recipient's responsibility to print to correct scale. Only written dimensions should be used.

Legend

- Milford Haven Port Authority Other Land Ownership
- Application Site Boundary
- Overgrown with Vegetation

Note: Observations from site reconnaissance visit by RPS in January 2018.



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Client MILFORD HAVEN PORT AUTHORITY
Project PEMBROKE DOCK MARINE DEVELOPMENT
Title SITE RECONNAISSANCE PLAN

Status PRELIMINARY
Job Ref JER1262
Drawn By AM
Scale @ A3 1:4,000
Date Created FEB 18

Checked By AT
Rev -
Drawing Number JER1262-DTS-001
Rev -
 rpsgroup.com/uk

Rev	Description	Date	Initial	Checked

1. The drawings are based on information provided by the applicant and are not intended to be used for any other purpose. The applicant is responsible for ensuring that the information provided is accurate and complete. The drawings are not to be used for any other purpose without the written consent of the engineer.

2. The drawings are not to be used for any other purpose without the written consent of the engineer.

- Application boundary (0.75 ha (28.54 acres))
- Land Leased to Municipality
- Proposed buildings to be retained
- Proposed transport corridor
- Ship Access
- Main Line Water
- Multi-Meter High Water
- Proposed Multi-use laydown/assembly yard area
- Security gate/check point
- Temporarily Manned Security Point
- Key movement routes
- Landscaping (in maintenance landscape)
- Key Access Points
- Proposed Pavement
- Heritage Mitigation areas and enhancements (designated to heritage LDC applications)

Proposed High Quality Fabrication Facility
 A - Fabrication building for sub-investment and marine infrastructure (total 171,000sqm) - (170m x 170m and 170m x 170m)
 F1 - Sub-investment multi-use laydown and final assembly area (1,000sqm)
 F2 - Sub-investment multi-use laydown and final assembly area (1,000sqm)

Proposed High Bay Ship Repair and Fabrication Facility
 A - Ship repair and large open fabrication area (11,000sqm) - (120m x 200m and 100m x 100m)
 C1 - Light assembly and maintenance external storage and parking area (1,000sqm)

Proposed Shipping and Transition Area
 A - Storage and large open transition area (11,000sqm) - (120m x 200m and 100m x 100m)
 C1 - Light assembly and maintenance external storage and parking area (1,000sqm)

Proposed Light Assembly and Maintenance Facility
 A - Light assembly and maintenance external storage and parking area (1,000sqm)
 D - Open batching plant and storage area (1,000sqm)

Proposed Employees Car Park
 B - Employees car park

The building lease is indicated generally only and will be subject to further site specific requirements. The transport corridors will allow vehicle companies to park their vehicles on site and will be subject to the relevant rules and regulations. The light vehicle lease is also subject to the relevant rules and regulations.



RPS
 100 Park Avenue, Suite 1000
 Westborough, MA 01581
 Tel: 508.735.8800 Fax: 508.735.8801

Date: Milford Haven Port Authority

Project: Pembroke Dock Marine

Title: Draft Proposed Masterplan

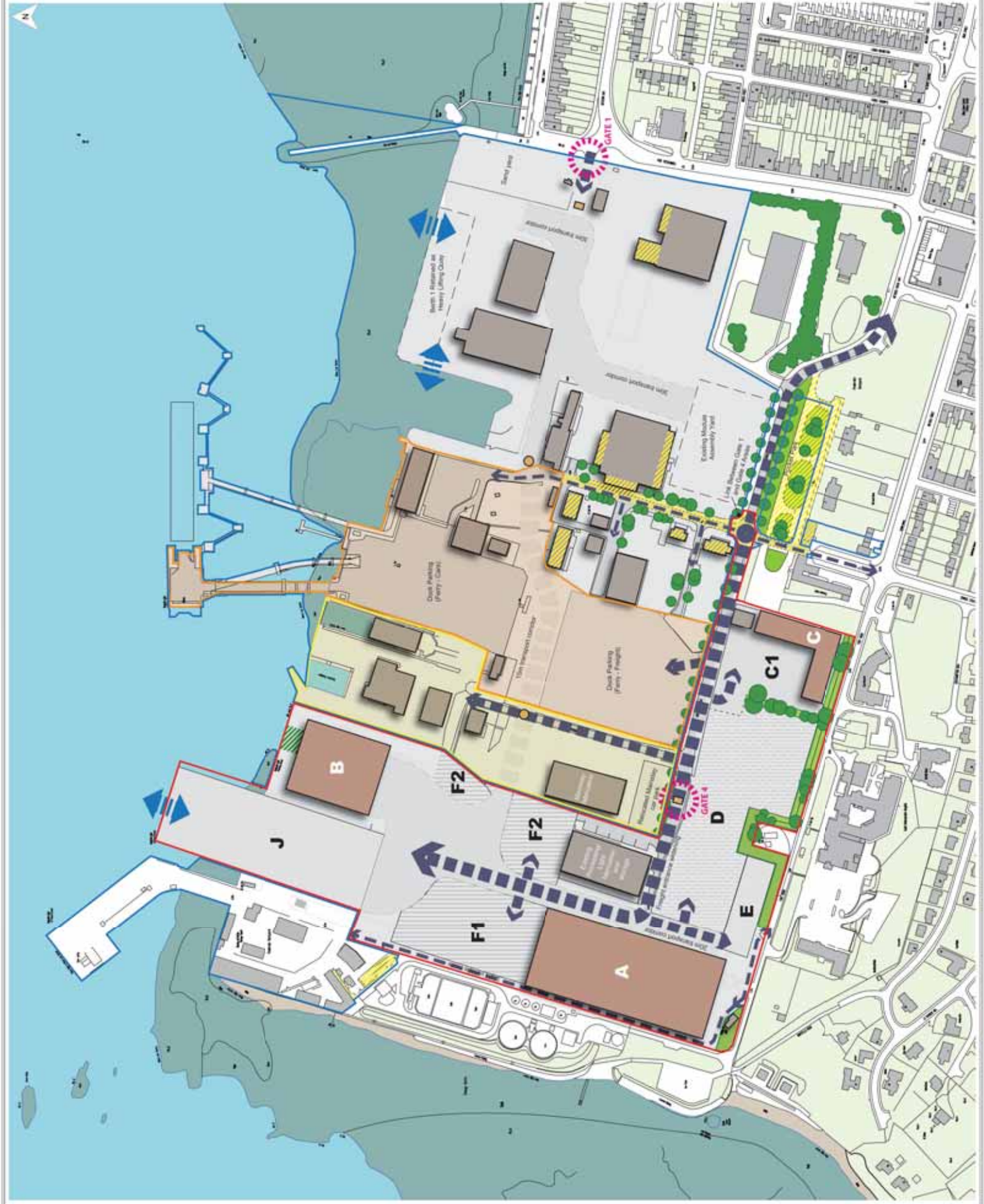
Drawn By: AWPD

Checked By: DW

Date Created: April 2018

Job Ref: JPM115-04

Revision: H



Appendices

Desk-Top Study Methodology

Introduction

This report provides available factual data for the site obtained only from the sources described below and related to the site on the basis of the location provided by the client. The desk study information is not necessarily exhaustive and further information relevant to the site may be available from other sources. No responsibility can be accepted by RPS for inaccuracies in the data supplied by any other party.

This report is written in the context of an agreed scope of work and should not be used in a different context. Furthermore, new information and changes in legislation may necessitate a re-interpretation of the report in whole or in part after its original submission. The report is provided for sole use by the client and is confidential to them and their professional advisors. No reliance whatsoever is provided to any party other than the client unless otherwise agreed.

Information Sources

Land Use

This section establishes the former and current uses of the site, which could have caused contamination. Details of the site location, the current and proposed site uses have been provided by the client.

Where specified, a site inspection has been carried out by RPS to identify any significant issues associated with current and past activities, neighbouring land uses and other key environmental issues.

Information about the history of the site has been obtained through an inspection of historical maps at 1:10,000, 1:2,500 and 1:1,250 scales (where available). The accuracy of maps cannot be guaranteed and it should be recognised that different conditions on site may have existed between, and subsequent to, the map survey dates.

Regulatory records including landfills, pollution incidents ('major' and 'significant' only), industry authorisations and licensed water abstractions are derived from information purchased from Landmark Ltd (unless otherwise specified).

Environmental Setting

It is important to establish the environmental setting because, irrespective of the level of contamination at a site, if its location is not 'sensitive' to this contamination, there is a reduced risk of an environmental liability.

The geological sequence underlying the site and the approximate depths of strata are provided by maps published by the British Geological Survey (BGS) 1:50,000 scale. The hydrogeological classification is obtained from Groundwater Vulnerability mapping on the Environment Agency (EA) website. The vulnerability of groundwater is determined from this mapping and geological information.

The location of surface watercourses is obtained from an inspection of current OS maps. Surface water quality information is taken from the most up-to-date Chemical River Quality General Quality Assessment (GQA) details published by the EA. Flood risk details and information on groundwater Source Protection Zones are obtained from readily available EA information published on-line.

Details of sensitive ecosystems/habitats and coal mining areas are supplied by English Nature and the Coal Authority respectively via Landmark Ltd.

Radon is a radioactive gas produced naturally by certain types of geology. This report uses the Indicative Atlas of Radon in England and Wales (2007) produced by the Health Protection Agency (HPA) and the British Geological Survey (BGS) to determine whether the site is located in an area at risk from radon gas. Where potential issues are identified, a site-specific radon report is obtained from the HPA and BGS to provide a more accurate estimate of the probability of the site being affected by radon gas ingress.

Risk Assessment

The Risk Assessment consists of an appraisal of the source-pathway-receptor 'pollutant linkages' which is central to the approach used to determine the existence of 'contaminated land' according to the definition set out under Part 2A of the Environmental Protection Act 1990. For a risk to exist (under Part 2A), all three of the following components must be present to facilitate a potential 'pollutant linkage'.

- Source of contamination (Hazard);
- Pathway for the contaminant to move from the source(s) to receptor(s); and
- Receptor (Target) that could be affected by the contaminant(s).

Receptors include human beings, other living organisms, crops, controlled waters and buildings / structures. The mere presence of a contaminant source / hazard at a site does not mean that there will necessarily be attendant risks or that the site will be designated as 'contaminated land'.

The Risk Assessment sections comprise a summary of the land use and environmental sensitivity information demonstrated as the contaminant Source, Pathway and Receptor components. It also incorporates its likelihood of occurrence and commercial impact. It has been classified under three broad categories:

- Low risk - it is considered unlikely that issues assigned this designation will give rise to significant harm;
- Moderate risk - it is possible, but not certain that issues assigned this designation may give rise to significant harm or a liability/cost for the owner of the site; and
- High risk - there is a high potential that issues assigned this designation may give rise to significant harm or a liability/cost for the owner of the site.

In addition the assessment includes consideration of redevelopment constraints i.e. potential for extraordinary environment-related development costs, the site's 'suitability for use' and the perception by any future purchasers regarding the potential impact on investment value/saleability. The assessment of redevelopment constraints should be considered preliminary and does not represent an exhaustive assessment of potential constraints.

Appendix 2

Photographic Record



Plate 01: Facing north towards estuary from Gate 1. Security hut on the right.



Plate 02: Facing west, towards Western Sunderland Hanger and water tanks.



Plate 03: Skips and waste bins north of security gate Gate 1.



Plate 04: Facing north towards estuary. Modern diesel tank on warehouse corner. Former tank bund (yellow) adjacent.



Plate 05: Former tank bund and plinths.



Plate 06: Facing south. Showing section of oil processing equipment. Trees along Meyrick Owen Way visible in rearground.



Plate 07: Disused tower, fenced off and not part of the Assessment Site.



Plate 08: Overgrown vegetation at Milforge Site, facing residential properties offsite to the south of the Assessment Site.



Plate 09: Demolition rubble in mounds at Milforge Site. Disused warehouse buildings in rearground.



Plate 10: Possible inspection pit in floor of disused warehouse at Milforge Site.



Plate 11: Fly-tipped waste outside warehouse in Milforge Site.



Plate 12: Facing southwest. Showing eastern sloping side of Timber Pond.



Plate 13: Facing south towards Assessment Site boundary wall. Circular burnt area to the left.



Plate 14: Fuelling point in southwest corner. Facing north.



Plate 15: Facing north towards the estuary. Showing Slipway 1.



Plate 16: Facing north towards the estuary. Showing Slipway 2.





Plate 17: Gas supply control valve, south of Slipway 1. Facing northwest.



Plate 18: Chemical store at Slipway 2.



Plate 19: End of Slipway 1 at low tide. Facing northwest.



Plate 20: Showing graving dock in the north of the Assessment Site. Facing north.



Plate 21: Oily sheen observed on rainwater puddles between graving dock and scrap yard.



Plate 22: Electrical sub-station present between Slipway 2 and 'triangle' area of land not owned by MHPA.



Plate 23: Vegetation and hardstanding at the graving dock. Facing northeast, towards ferry port.

Client: Milford Haven Port Authority

Project: Pembroke Dock

Job Ref: JER1262 Checked By: DRAFT Date: Feb 2018



Envirocheck Professional Report including historical maps



Groundwater Vulnerability

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID

Agency and Hydrological

Geological Classes

Major Aquifer (Highly Permeable)

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

Low

Minor Aquifer (Variably Permeable)

High (H) 1, 2, 3, U

Intermediate (I) 1, 2

Low

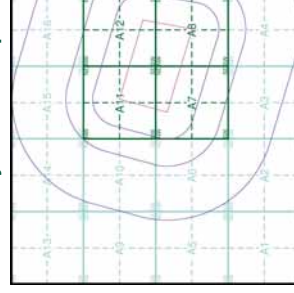
Non Aquifer (Negligibly Permeable)

Water or Sea

Drift Deposit

.....

Site Sensitivity Context Map - Slice A

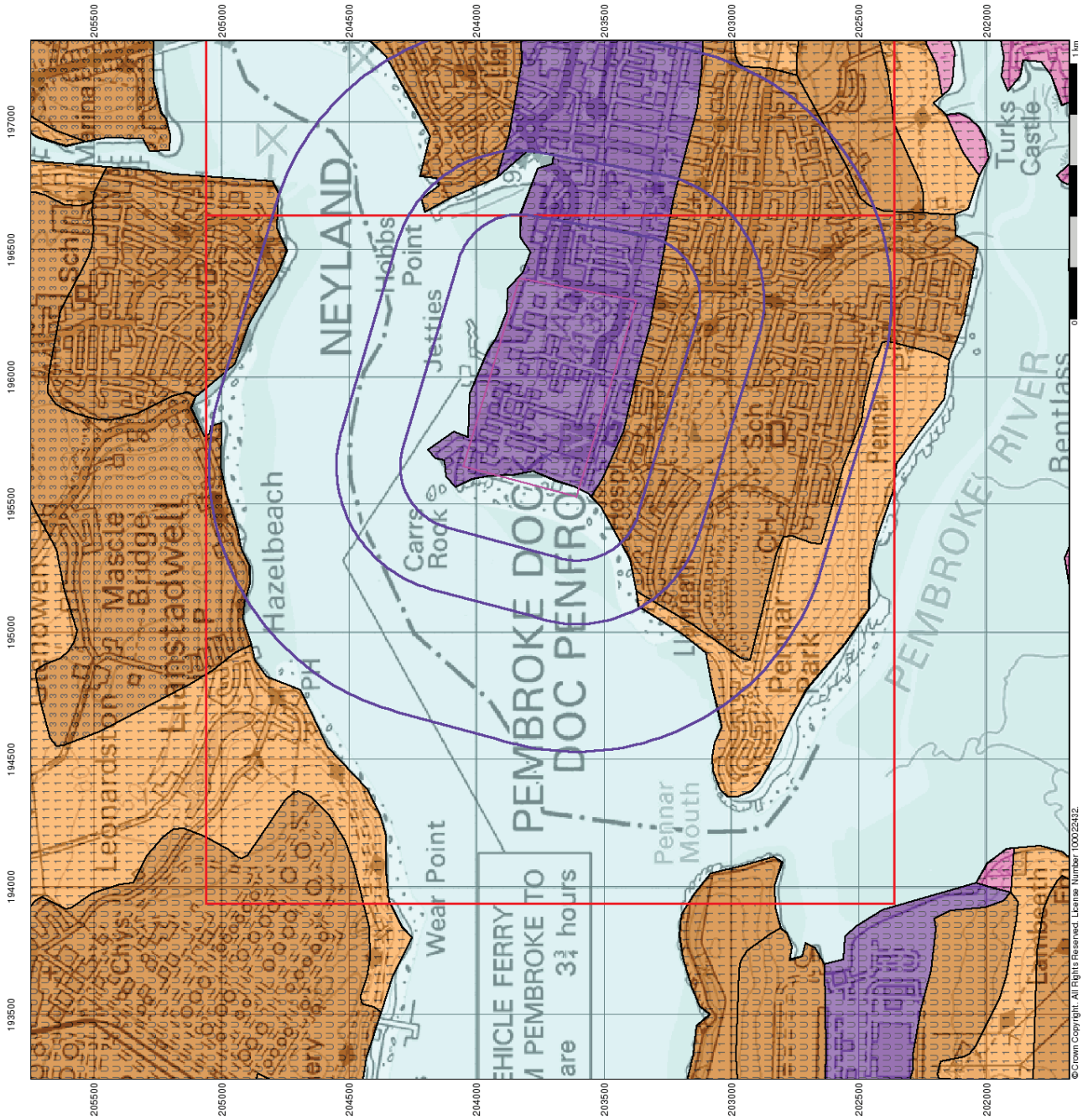


Order Details

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 National Grid Reference: 196690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

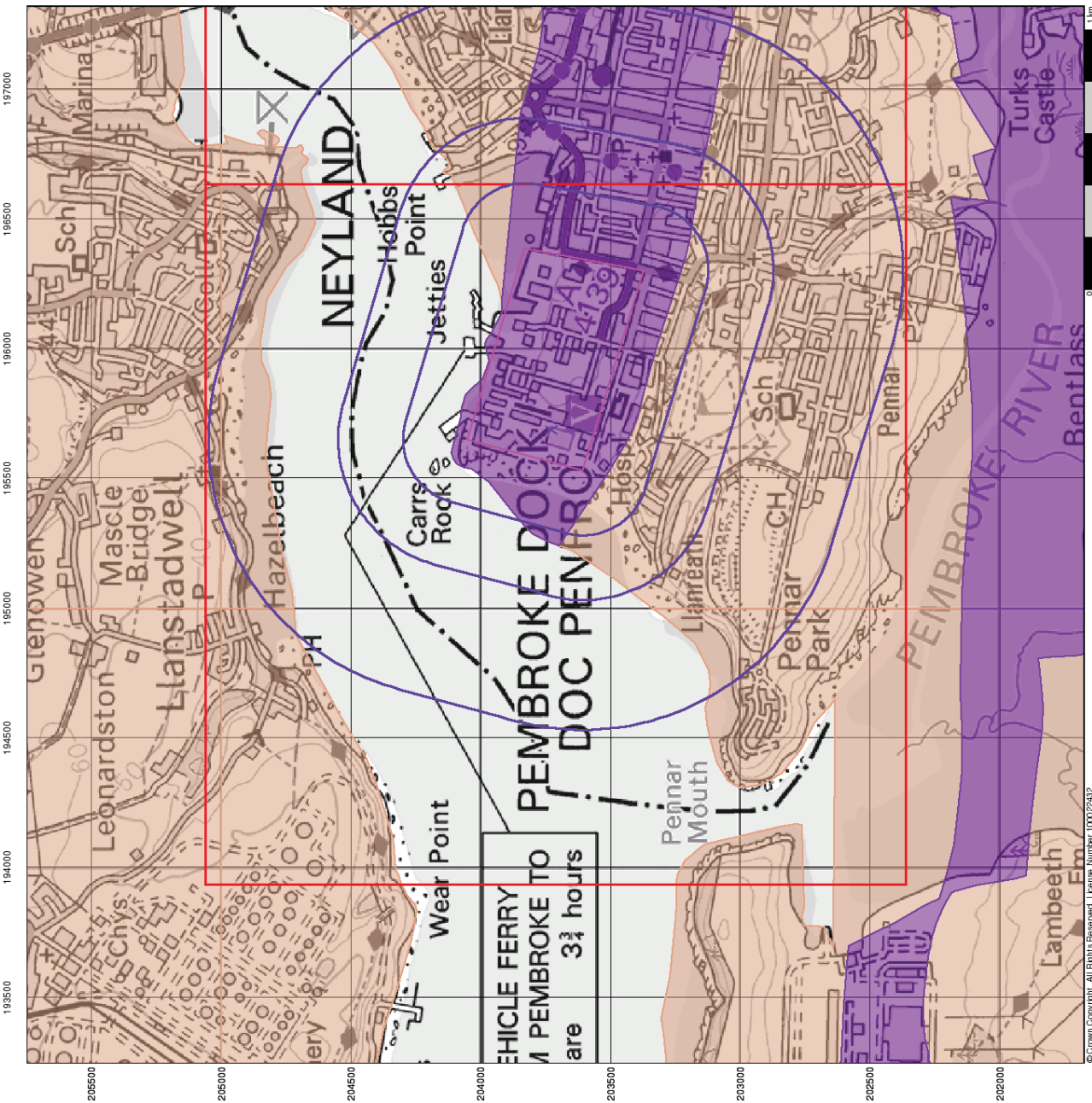
Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



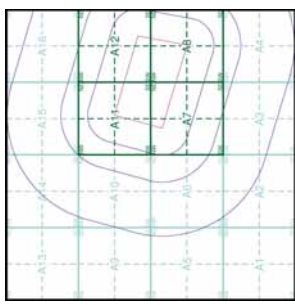


Bedrock Aquifer Designation

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Site
 - Map ID
- Agency and Hydrological**
- Principal Aquifer
 - Secondary A Aquifer
 - Secondary B Aquifer
 - Secondary Undifferentiated
 - Unproductive Strata
 - Unknown
 - Unknown (Lakes and Landlip)



Site Sensitivity Context Map - Slice A



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



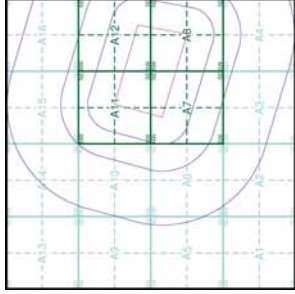
Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirock.co.uk



Superficial Aquifer Designation

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Site
 - Map ID
- Agency and Hydrological**
- Principal Aquifer
 - Secondary A Aquifer
 - Secondary B Aquifer
 - Secondary Undifferentiated
 - Unproductive Strata
 - Unknown
 - Unknown (Lakes and Landlip)

Site Sensitivity Context Map - Slice A



Order Details

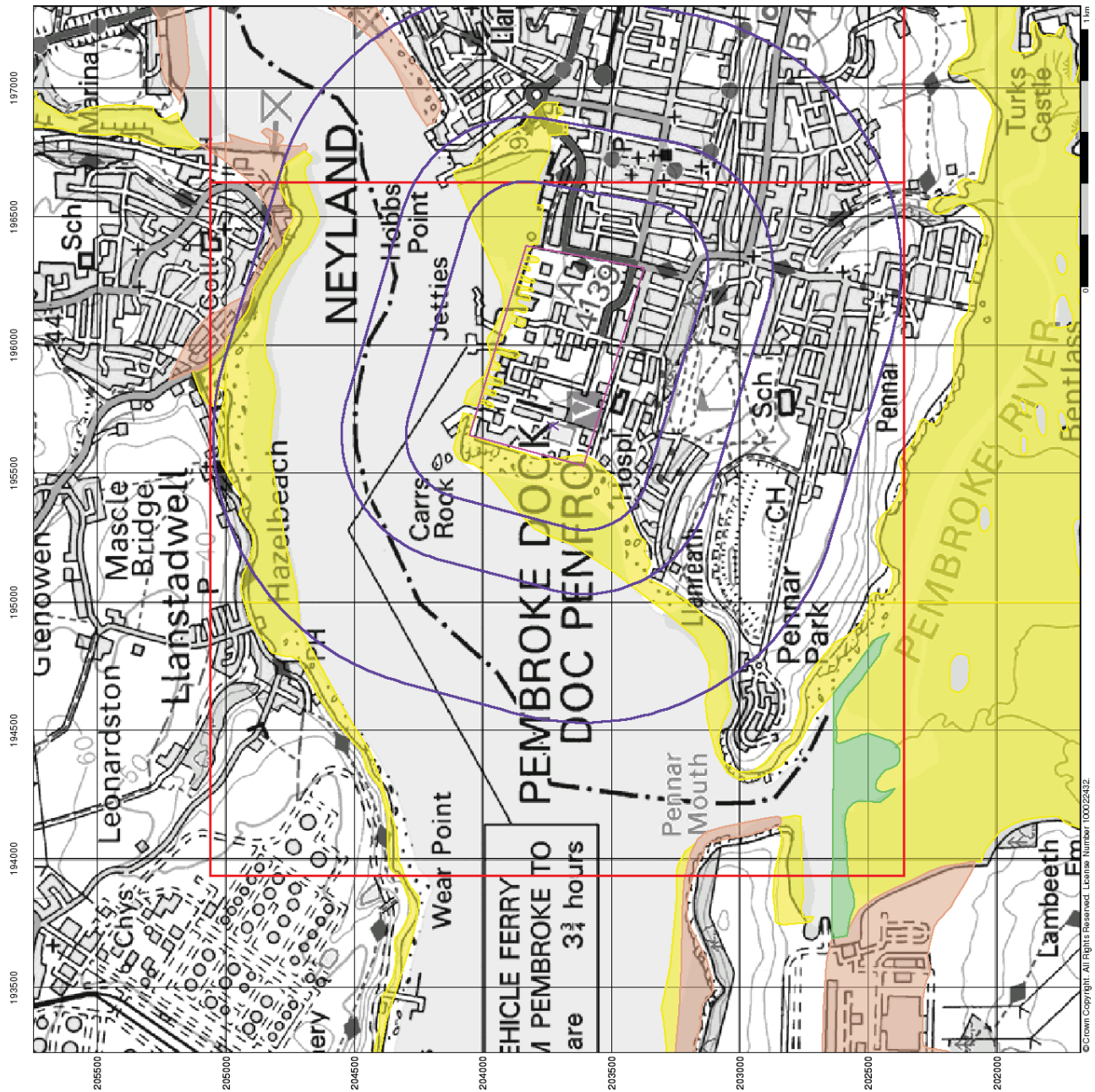
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 Customer Ref: JER1262
 National Grid Reference: 196690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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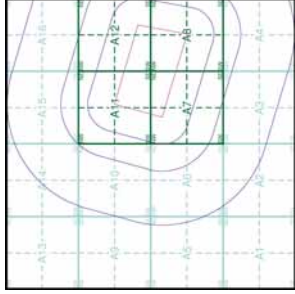
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Source Protection Zones

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
- Agency and Hydrological**
- Inner zone (Zone 1)
 - Inner zone - subsurface activity only (Zone 1c)
 - Outer zone (Zone 2)
 - Outer zone - subsurface activity only (Zone 2c)
 - Total catchment (Zone 3)
 - Total catchment - subsurface activity only (Zone 3c)
 - Special Interest (Zone 4)
 - Source Protection Zone Borehole

Site Sensitivity Context Map - Slice A



Order Details

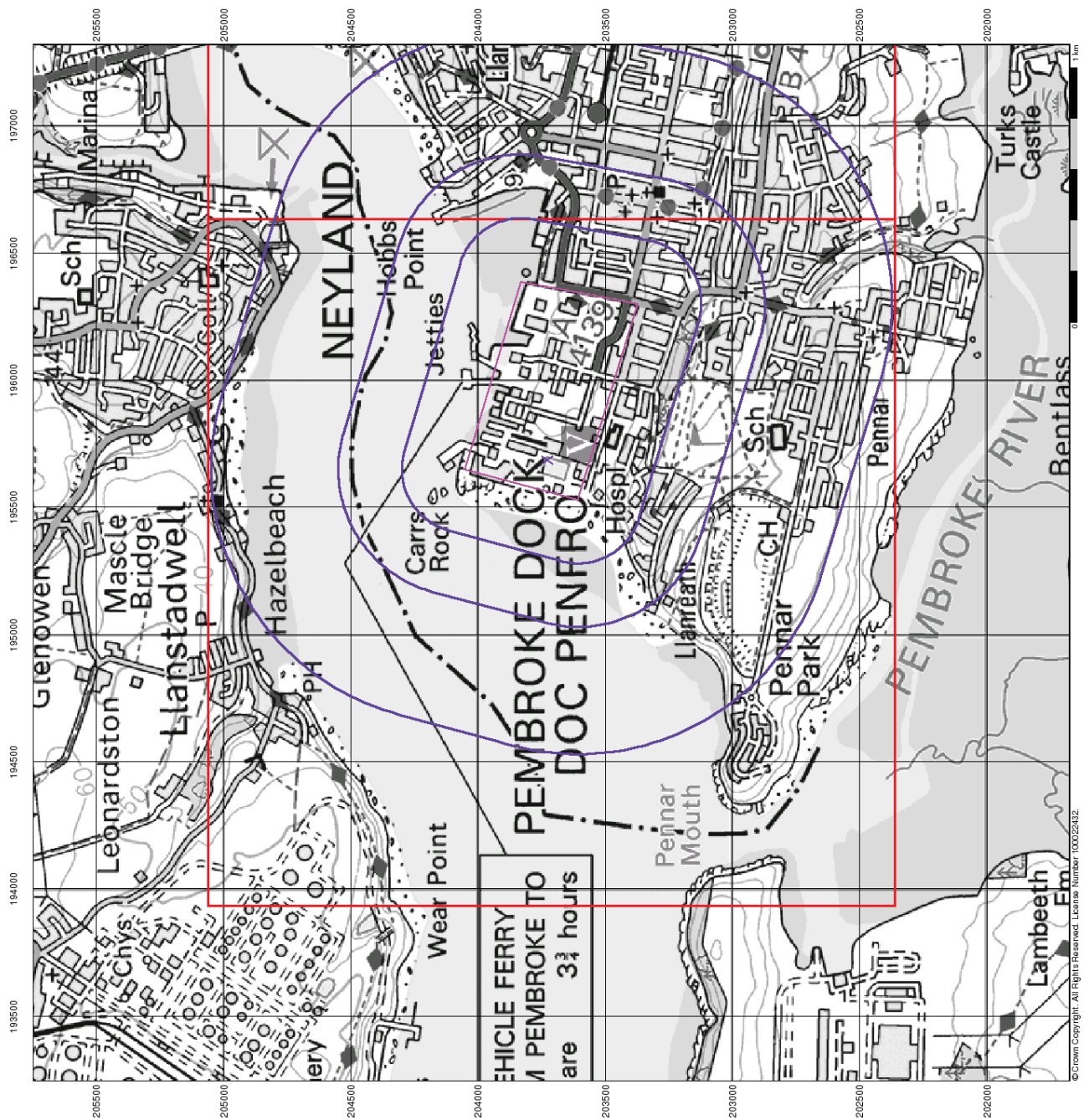
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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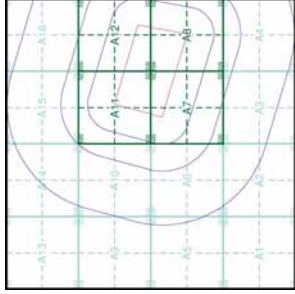




Sensitive Land Uses

- General**
- Specified Site
 - Specified Buffer(s)
 - Map ID
 - Bearing Reference Point
- Sensitive Land Uses**
- Ancient Woodland
 - Area of Adopted Green Belt
 - Area of Unadopted Green Belt
 - Area of Outstanding Natural Beauty
 - Environmentally Sensitive Area
 - Forest Park
 - Local Nature Reserve
 - Marine Nature Reserve
 - National Nature Reserve
 - National Park
 - Nitrate Sensitive Area
 - Nitrate Vulnerable Zone
 - Ramsar Site
 - Site of Special Scientific Interest
 - Special Area of Conservation
 - Special Protection Area
 - World Heritage Sites

Site Sensitivity Context Map - Slice A



Order Details

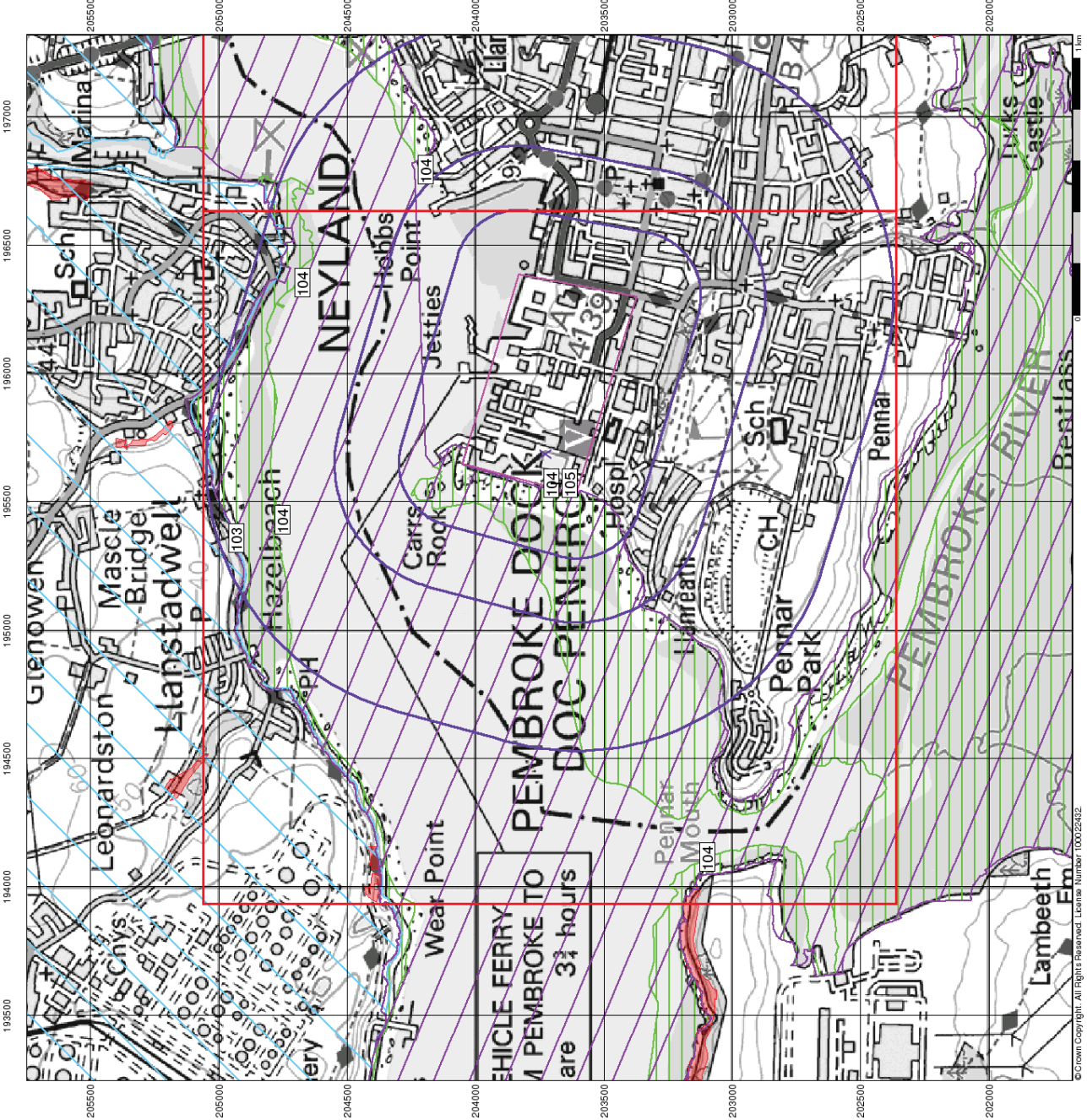
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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BGS Flood GFS Data

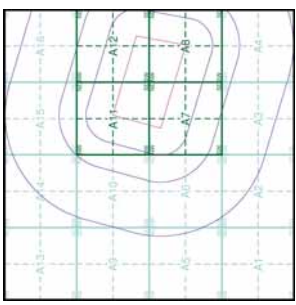
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Site

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

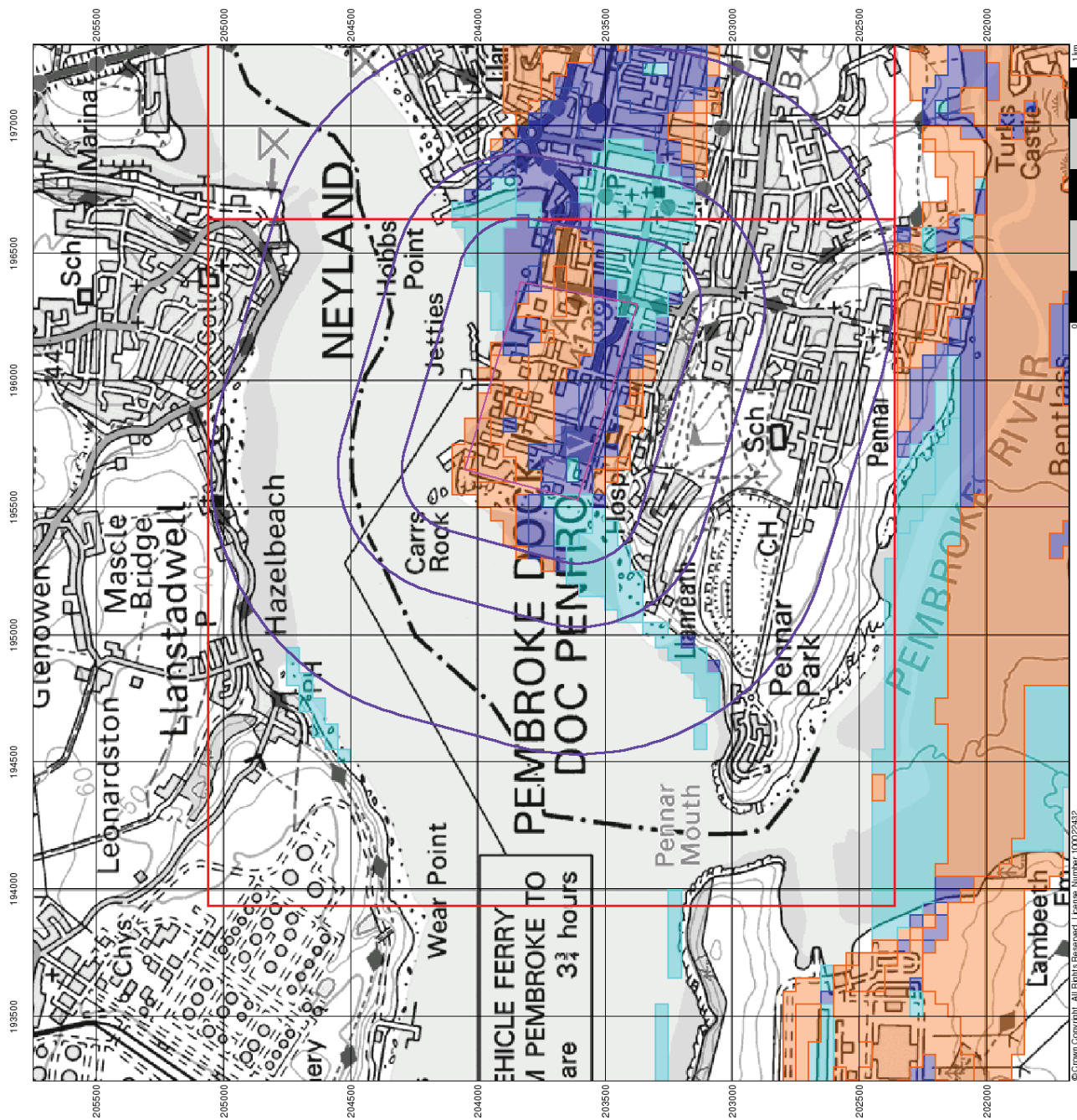
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 Customer Ref: JER1262
 National Grid Reference: 196690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

152819812_1_1

Customer Reference:

JER1262

National Grid Reference:

195690, 203730

Slice:

A

Site Area (Ha):

36.27

Search Buffer (m):

1000

Site Details:

Milford Haven Port Authority
Captain Superintendents Building
Admiralty Way, The Dockyard
PEMBROKE DOCK
SA72 6TD

Client Details:

Ms A Thomas
RPS Consultants
260 Park Avenue
Aztec West
Almondsbury
Bristol
BS32 4SY

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	20
Hazardous Substances	22
Geological	23
Industrial Land Use	25
Sensitive Land Use	30
Data Currency	31
Data Suppliers	35
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Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 3	2	5	9	14
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 11	1			
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 11	Yes			
Pollution Incidents to Controlled Waters	pg 11	2	2	6	8
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 14	1		1	
Water Abstractions	pg 14				(*1)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 14	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 15	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 15	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 15	Yes		n/a	n/a
Flooding from Rivers or Sea without Defences	pg 15	Yes		n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 15			17	17

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 20				1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 20	4			
Local Authority Landfill Coverage	pg 21	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 21				1
Potentially Infilled Land (Non-Water)					
Potentially Infilled Land (Water)	pg 21	1	2		
Registered Landfill Sites	pg 21		1		
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites	pg 22	1			
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 23	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 23	Yes	Yes		
BGS Recorded Mineral Sites	pg 23	1			
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 23	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 23	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 23	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 24	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 24	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 24	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 24	Yes		n/a	n/a
Radon Potential - Radon Affected Areas	pg 24	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures	pg 24	Yes	n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 25	22	4	1	4
Fuel Station Entries	pg 27				1
Points of Interest - Commercial Services	pg 27		1		
Points of Interest - Education and Health	pg 27		4		
Points of Interest - Manufacturing and Production	pg 28	13			1
Points of Interest - Public Infrastructure	pg 29	1			
Points of Interest - Recreational and Environmental	pg 29		2		4
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas	pg 30				1
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest	pg 30	1			
Special Areas of Conservation	pg 30	1			
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SW (W)	0	1	195600 203729
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (E)	0	1	195700 203729
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SW (E)	0	1	196150 203729
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NW (SE)	0	1	196200 203400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (N)	0	1	195687 203850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (NE)	0	1	195800 203850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	196100 203850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	0	1	196350 203750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	196100 203800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11SW (W)	0	1	195550 203729
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (NW)	0	1	195650 203750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	0	1	196200 203750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SW (E)	0	1	196100 203900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (NW)	0	1	195687 203729
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SE)	0	1	195750 203700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (E)	0	1	196200 203550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A7NE (S)	0	1	195687 203650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (NE)	0	1	195850 203800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	0	1	196300 203800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (E)	0	1	196250 203700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (SE)	0	1	195900 203450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SW (NE)	4	1	196000 203950

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (S)	6	1	195687 203550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12SW (E)	14	1	196200 203900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SW (W)	20	1	195550 203750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (S)	20	1	195650 203550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (S)	24	1	195750 203500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (SE)	33	1	196050 203400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SW (NW)	33	1	195550 203800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (S)	39	1	195700 203500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SE)	48	1	195950 203400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NW (SW)	49	1	195550 203550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (S)	53	1	195687 203500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A7NW (SW)	65	1	195500 203550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8SW (SE)	67	1	196100 203350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (S)	68	1	195650 203500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SE)	77	1	195900 203400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8SW (SE)	81	1	196000 203350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8SW (SE)	85	1	196200 203300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8SW (SE)	100	1	196150 203300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (S)	101	1	195687 203450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8SE (SE)	123	1	196300 203250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	127	1	196500 203729
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (E)	163	1	196500 203550

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NW (W)	185	1	195350 203700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SW (W)	200	1	195350 203729
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (E)	203	1	196550 203600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12SE (E)	216	1	196600 203750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (E)	225	1	196600 203729
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SW (W)	226	1	195350 203800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (E)	234	1	196600 203700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NW (W)	234	1	195300 203700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SW (W)	248	1	195300 203729
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (E)	252	1	196600 203600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(E)	343	1	196650 204050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	357	1	196700 204000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	383	1	196750 203950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	415	1	196800 203850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	420	1	196800 203900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	480	1	196750 203200
1	Discharge Consents Operator: Milford Haven Port Authority Property Type: Support Services - Inland Transport Location: Pembroke Dock Ferry Terminal, Pembrokeshire, Wales, Sa72 6tw Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: Bp027620101 Permit Version: 1 Effective Date: 27th April 1999 Issued Date: 27th April 1999 Revocation Date: 11th April 2000 Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Not Supplied Receiving Water: Milford Haven Estuary Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A12SW (NE)	0	2	196000 203920

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	<p>Discharge Consents</p> <p>Operator: Milford Haven Port Authority Property Type: Support Services - Inland Transport Location: Pembroke Dock Ferry Terminal, Pembrokeshire, Wales, Sa72 6tw Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: Bp027620101 Permit Version: 2 Effective Date: 12th April 2000 Issued Date: 27th April 1999 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge: Saline Estuary Environment: Receiving Water: Milford Haven Estuary Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A12SW (NE)	0	2	196000 203920
2	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Station - Water Company Location: Pembroke Dock To The Milford H, Pembrokeshire, Wales Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: BN0084702 Permit Version: 1 Effective Date: 10th April 1979 Issued Date: 10th April 1979 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Saline Estuary Environment: Receiving Water: Milford Haven Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m</p>	A7NW (SW)	15	2	195520 203620
3	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Pembroke Dock Crude Outfall Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: Bg0050201 Permit Version: 1 Effective Date: 9th August 1965 Issued Date: 9th August 1965 Revocation Date: 21st November 1996 Discharge Type: Sewerage System Discharge Discharge: Not Supplied Environment: Receiving Water: Milford Haven Estuary Status: Consent expired Positional Accuracy: Located by supplier to within 100m</p>	A11NW (N)	192	2	195520 204190
3	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Pembroke Dock Low Level O/Fall Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0116401 Permit Version: 1 Effective Date: 13th December 1991 Issued Date: 13th December 1991 Revocation Date: 5th July 1995 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Dau Cleddau Status: Consent expired Positional Accuracy: Located by supplier to within 10m</p>	A11NW (N)	213	2	195510 204210

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Pembroke Dock Low Level O/Fall Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0116501 Permit Version: 1 Effective Date: 13th December 1991 Issued Date: 13th December 1991 Revocation Date: 5th July 1995 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Dau Cleddau Status: Consent expired Positional Accuracy: Located by supplier to within 10m</p>	A11NW (N)	213	2	195510 204210
3	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Pembroke Crude Outfall Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: Bg0050101 Permit Version: 1 Effective Date: 9th August 1965 Issued Date: 9th August 1965 Revocation Date: 21st November 1996 Discharge Type: Sewerage System Discharge Discharge: Not Supplied Environment: Receiving Water: Milford Haven Estuary Status: Consent expired Positional Accuracy: Located by supplier to within 100m</p>	A11NW (N)	215	2	195520 204220
4	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Pembroke Dock Wastewater Treatment, Pembroke Dock Wwtw, Fort Road, Pembroke Dock, Pembrokeshire Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: Bp0250801 Permit Version: 7 Effective Date: 8th July 2015 Issued Date: 8th July 2015 Revocation Date: Not Supplied Discharge Type: Sewage - Crude To Further Treatment - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Milford Haven Waterway Status: Varied under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A11NW (NW)	284	2	195450 204250
4	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Pembroke Dock Wastewater Treatment, Pembroke Dock Wwtw, Fort Road, Pembroke Dock, Pembrokeshire Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: Bp0250801 Permit Version: 6 Effective Date: 20th December 2013 Issued Date: 20th December 2013 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Milford Haven Waterway Status: Varied under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A11NW (NW)	284	2	195450 204250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Pembroke Dock Wastewater Treatment, Pembroke Dock Wwtw, Fort Road, Pembroke Dock, Pembrokeshire</p> <p>Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: Bp0250801 Permit Version: 5 Effective Date: 4th April 2012 Issued Date: 4th April 2012 Revocation Date: 19th December 2013 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Milford Haven Waterway Status: Varied under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A11NW (NW)	284	2	195450 204250
4	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Pembroke Dock Wastewater Treatment, Pembroke Dock Wwtw, Fort Road, Pembroke Dock, Pembrokeshire</p> <p>Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: Bp0250801 Permit Version: 4 Effective Date: 31st March 2010 Issued Date: 31st March 2010 Revocation Date: 3rd April 2012 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Milford Haven Waterway Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A11NW (NW)	284	2	195450 204250
4	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Pembroke Dock Wastewater Treatment, Pembroke Dock Wwtw, Fort Road, Pembroke Dock, Pembrokeshire</p> <p>Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: Bp0250801 Permit Version: 3 Effective Date: 31st December 2005 Issued Date: 31st December 2005 Revocation Date: 30th March 2010 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Milford Haven Waterway Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A11NW (NW)	284	2	195450 204250
4	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Pembroke Dock Wastewater Treatment, Pembroke Dock Wwtw, Fort Road, Pembroke Dock, Pembrokeshire</p> <p>Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: Bp0250801 Permit Version: 2 Effective Date: 22nd December 2000 Issued Date: 21st December 2000 Revocation Date: 20th January 2006 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Not Supplied Environment: Receiving Water: Milford Haven Waterway Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A11NW (NW)	284	2	195450 204250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Pembroke Dock Wastewater Treatment, Pembroke Dock Wwtw, Fort Road, Pembroke Dock, Pembrokeshire</p> <p>Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: BP0250803 Permit Version: 1 Effective Date: 31st March 1995 Issued Date: 18th November 1994 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Saline Estuary Environment: Receiving Water: Milford Haven Waterway Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m</p>	A11NW (NW)	284	2	195450 204250
4	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Pembroke Dock Wastewater Treatment, Pembroke Dock Wwtw, Fort Road, Pembroke Dock, Pembrokeshire</p> <p>Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: BP0250801 Permit Version: 1 Effective Date: 31st March 1995 Issued Date: 18th November 1994 Revocation Date: 21st December 2000 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Not Supplied Environment: Receiving Water: Milford Haven Waterway Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 10m</p>	A11NW (NW)	284	2	195450 204250
4	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Pembroke Dock Wastewater Treatment, Pembroke Dock Wwtw, Fort Road, Pembroke Dock, Pembrokeshire</p> <p>Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: BP0250802 Permit Version: 1 Effective Date: 31st March 1995 Issued Date: 18th November 1994 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Milford Haven Waterway Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 10m</p>	A11NW (NW)	284	2	195450 204250
5	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Pumping Station - Water Company Location: School Garden Sewage Ps, Pennar, Pembroke Dock, Pembrokeshire, Wales, Sa72 6qn</p> <p>Authority: Natural Resources Wales Catchment Area: Pembroke River Reference: Eprdp3822gc Permit Version: 1 Effective Date: 26th July 2010 Issued Date: 26th July 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Of Pembroke River Status: New issued under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A4NE (SE)	633	2	196329 202741

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	<p>Discharge Consents</p> <p>Operator: John Allen Developments Property Type: Sewerage Network - Pumping Station - Others Location: School Garden Sps Pennar Pembroke, Pennar, Pembroke Dock, Pembrokeshire, SA72 6ny Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0291501 Permit Version: 1 Effective Date: 24th August 2001 Issued Date: 24th August 2001 Revocation Date: 25th July 2010 Discharge Type: Sewage Discharges - Pumping Station - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Unnamed Trib Of Pembroke River Status: Authorisation revoked Positional Accuracy: Located by supplier to within 10m</p>	A4NE (SE)	633	2	196300 202740
6	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Neyland P.S. . . Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0111601 Permit Version: 2 Effective Date: 8th September 2010 Issued Date: 8th September 2010 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Milford Haven Status: Varied under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A15NE (N)	792	2	195870 204810
6	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Neyland P.S. . . Authority: Natural Resources Wales Catchment Area: Not Given Reference: BP0111601 Permit Version: 1 Effective Date: 13th December 1991 Issued Date: 13th December 1991 Revocation Date: 7th September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Milford Haven Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m</p>	A15NE (N)	792	2	195870 204810
6	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Neyland Wwtw Neyland Pembrokeshire, Neyland, Pembroke Authority: Natural Resources Wales Catchment Area: HA 61 Stream 400 Reference: Bh0069602 Permit Version: 5 Effective Date: 1st January 2010 Issued Date: 24th September 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Milford Haven Waterway Estu'L Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A15NE (N)	798	2	195832 204826

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Neyland Wwtw Neyland Pembrokeshire, Neyland, Pembroke Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0347501 Permit Version: 1 Effective Date: 31st December 2005 Issued Date: 31st August 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Saline Estuary Environment: Receiving Water: Milford Haven Waterway Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A15NE (N)	798	2	195832 204826
6	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Neyland Wwtw Neyland Pembrokeshire, Neyland, Pembroke Authority: Natural Resources Wales Catchment Area: HA 61 Stream 400 Reference: Bh0069602 Permit Version: 4 Effective Date: 31st December 2005 Issued Date: 31st August 2005 Revocation Date: 31st December 2009 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Saline Estuary Environment: Receiving Water: Milford Haven Waterway Estu'L Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A15NE (N)	798	2	195832 204826
7	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Neyland Promenade Cso Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: BP0223901 Permit Version: 1 Effective Date: 4th August 1993 Issued Date: 4th August 1993 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Milford Haven Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m</p>	A16NE (NE)	861	2	196350 204740
8	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Neyland Stw Authority: Natural Resources Wales Catchment Area: HA 61 Stream 400 Reference: Bh0069602 Permit Version: 2 Effective Date: 8th March 2005 Issued Date: 8th March 2005 Revocation Date: 30th August 2005 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: The Milford Haven Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A15NE (N)	887	2	195900 204900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Neyland Stw Authority: Environment Agency, Welsh Region Catchment Area: HA 61 Stream 400 Reference: Bh0069602 Permit Version: 3 Effective Date: 29th September 2005 Issued Date: 8th March 2005 Revocation Date: 28th September 2005 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: The Milford Haven Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A15NE (N)	887	3	195900 204900
8	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works - Water Company Location: Neyland Stw Authority: Natural Resources Wales Catchment Area: HA 61 Stream 400 Reference: BH0069602 Permit Version: 1 Effective Date: 21st November 1978 Issued Date: 21st November 1978 Revocation Date: 7th March 2005 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge: Not Supplied Environment: Receiving Water: The Milford Haven Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m</p>	A15NE (N)	887	2	195900 204900
9	<p>Discharge Consents</p> <p>Operator: Mr M Howlett Property Type: Sewerage Network - Pumping Station - Others Location: Sycamore Woods Pumping Station, Sycamore Street, Bufferland, Pembroke Dock, Pembrokeshire, Sa72 6qw Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0353401 Permit Version: 1 Effective Date: 1st June 2006 Issued Date: 1st June 2006 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Pumping Station - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of Jacob'S Pill Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A4SE (SE)	893	2	196518 202507
10	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Promenade Neyland Swo Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0208601 Permit Version: 2 Effective Date: 8th September 2010 Issued Date: 8th September 2010 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Milford Haven Status: Varied under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	A15NE (N)	955	2	195940 204960

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Promenade Neyland Swo Authority: Natural Resources Wales Catchment Area: Not Given Reference: BP0208601 Permit Version: 1 Effective Date: 19th October 1989 Issued Date: 19th October 1989 Revocation Date: 7th September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Milford Haven Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m</p>	A15NE (N)	955	2	195940 204960
11	<p>Integrated Pollution Prevention And Control</p> <p>Name: Celtic Biodiesel Limited Location: Pembroke Biodiesel, The Cargo Shed, The Dockyard, Pembroke Dock, Dyfed, SA72 6TD Authority: Natural Resources Wales Permit Reference: JP3335LD Original Permit Ref: Jp3335ld Effective Date: 14th July 2006 Status: Revoked Application Type: Application App. Sub Type: New Positional Accuracy: Manually positioned to the address or location Activity Code: 4.1 A(1) (A) (II) Activity Description: Organic Chemicals; Oxygen Containing Compounds Eg Alcohols Primary Activity: Y Activity Code: 0.0 Associated Process Activity Description: Associated Process Primary Activity: N</p>	A12SW (E)	0	2	196210 203779
	Nearest Surface Water Feature	A11SE (N)	0	-	195775 204011
12	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Boats/Ships Location: PEMBROKE DOCK Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Poor Operational Practise Incident Date: 28th February 1995 Incident Reference: 22726 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Spillage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A11SE (NE)	0	3	195800 203900
13	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Water Company Sewage: Sewage Treatment Works Location: Carrs Rock Outfall Authority: Environment Agency, Welsh Region Pollutant: Farm Effluent/Slurry Note: Not Supplied Incident Date: 27th February 1995 Incident Reference: 22712 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A8NE (E)	0	3	196300 203600
14	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: Llanreath Beach Authority: Environment Agency, Welsh Region Pollutant: Heavy Fuel Oil Note: Milford Haven Waterway; Leachate Incident Date: 26th November 1997 Incident Reference: 34158 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Vandalism Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A7NW (SW)	31	3	195500 203600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: Pembroke Dock Ferry Terminal, PEMBROKE DOCK Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Milford Haven Waterway; Leakage Incident Date: 13th January 1998 Incident Reference: 35046 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Mechanical/Electrical Plant Failure Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A12SW (NE)	52	3	196000 204000
16	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: Pembroke Docks, LLANREATH Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 24th November 1996 Incident Reference: 30603 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m</p>	A6SE (SW)	444	3	195205 203305
16	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: New South Pembrokeshire Golf Course Authority: Environment Agency, Welsh Region Pollutant: Heavy Fuel Oil Note: Not Supplied Incident Date: 24th November 1996 Incident Reference: 30603 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m</p>	A6SE (SW)	447	3	195205 203300
16	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: Beach Directly Below Wtw, Llanrhyd Authority: Environment Agency, Welsh Region Pollutant: Heavy Fuel Oil Note: Not Supplied Incident Date: 24th November 1996 Incident Reference: 30603 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m</p>	A6SE (SW)	450	3	195205 203295
16	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: LLANREATH Authority: Environment Agency, Welsh Region Pollutant: Heavy Fuel Oil Note: Not Supplied Incident Date: 24th November 1996 Incident Reference: 30603 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m</p>	A6SE (SW)	454	3	195200 203295
17	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: At His House, Near Llanreath Beach Authority: Environment Agency, Welsh Region Pollutant: Algae Note: Natural Occurrence Incident Date: 24th June 1997 Incident Reference: 32745 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Natural Causes Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	A6NE (SW)	477	3	195100 203400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	Pollution Incidents to Controlled Waters Property Type: Not Given Location: At His House Near, Llanreath Beach Authority: Environment Agency, Welsh Region Pollutant: Algae Note: Llanreath Beach; Natural Occurrence Incident Date: 24th June 1997 Incident Reference: 32745 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Natural Causes Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6NE (SW)	479	3	195100 203395
18	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Llanreath Beach Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Llanreath Beach Incident Date: 14th August 1997 Incident Reference: 33242 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6SE (SW)	524	3	195200 203200
19	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Fields, Bottom Of Garden Authority: Environment Agency, Welsh Region Pollutant: Farm Land Run-Off Note: Not Supplied Incident Date: 11th March 1995 Incident Reference: 22805 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A4NE (SE)	673	3	196300 202700
20	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Surface Water Outfall Location: Between Treowen Road And, Sykemoor Street Authority: Environment Agency, Welsh Region Pollutant: Algae Note: Not Supplied Incident Date: 25th October 1994 Incident Reference: 21471 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A4NE (SE)	680	3	196400 202700
21	Pollution Incidents to Controlled Waters Property Type: Not Given Location: LLANREATH Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Natural Causes Incident Date: 15th August 1996 Incident Reference: 29816 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Natural Causes Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A6SW (SW)	809	3	194900 203100
22	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Neyland Yacht Club Authority: Environment Agency, Welsh Region Pollutant: Chlorinated Water Note: Not Supplied Incident Date: 1st April 1996 Incident Reference: 27873 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A16SE (NE)	833	3	196400 204695

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	Pollution Incidents to Controlled Waters Property Type: Not Given Location: Neyland Yacht Club Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 1st April 1996 Incident Reference: 27873 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A16SE (NE)	834	3	196405 204695
22	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Sewerage Location: Neyland Yacht Club Authority: Environment Agency, Welsh Region Pollutant: Chlorinated Water Note: Not Supplied Incident Date: 1st April 1996 Incident Reference: 27873 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A16SE (NE)	837	3	196400 204700
23	Pollution Incidents to Controlled Waters Property Type: Water Company Sewage: Sewerage Location: Neyland Yacht Club Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 3rd May 1996 Incident Reference: 28221 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A16SE (NE)	894	3	196600 204700
24	Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 12th October 2015 Incident Reference: 1380171 Water Impact: Category 4 - No Impact Air Impact: Category 2 - Significant Incident Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Atmospheric Pollutants and Effects Other Odour	A7NE (S)	0	2	195710 203570
25	Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 16th July 2002 Incident Reference: 91886 Water Impact: Category 4 - No Impact Air Impact: Category 2 - Significant Incident Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Asbestos Waste	A6SE (SW)	418	2	195209 203339
	Water Abstractions Operator: Mrs J V Llewellyn Licence Number: 22/61/5/0094 Permit Version: 100 Location: Unnamed Stream For Use On Woodbine Farm Authority: Natural Resources Wales Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Unnamed Stream For Use On Woodbine Farm Authorised Start: 01 May Authorised End: 31 July Permit Start Date: 24th July 2015 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(N)	1471	2	195620 205520
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 34 Pembroke Scale: 1:100,000	A11SE (NW)	0	3	195623 203756

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 34 Pembroke Scale: 1:100,000	A11SE (NW)	0	3	195687 203729
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	A11SE (NW)	0	1	195687 203729
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A7NW (W)	0	1	195559 203710
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A11SE (N)	0	1	195758 203959
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A7NW (W)	0	2	195572 203709
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A11SE (NE)	0	2	195811 203847
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A7NW (W)	0	2	195571 203708
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A11SE (NE)	0	2	195811 203848
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
26	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 174.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A7SW (SW)	414	4	195431 203196
27	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A7SW (SW)	421	4	195289 203261
28	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 29.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A7SW (SW)	421	4	195289 203261

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 14.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A7SW (SW)	421	4	195449 203192
30	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 64.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A6SE (SW)	422	4	195282 203266
31	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 20.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A6SE (SW)	422	4	195282 203266
32	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 5.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A7SW (SW)	423	4	195454 203188
33	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 107.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A7SW (SW)	425	4	195443 203190
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A6SE (SW)	440	4	195276 203248
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A6SE (SW)	440	4	195276 203248
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A6SE (SW)	442	4	195276 203245
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 13.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 2	A6SE (SW)	442	4	195276 203245

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	OS Water Network Lines Watercourse Form: Tidal river Watercourse Length: 29.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A6NE (SW)	445	4	195151 203374
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 68.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A6SE (SW)	445	4	195221 203287
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 88.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A6SE (SW)	448	4	195283 203234
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A6SE (SW)	452	4	195162 203344
42	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 63.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A7SW (S)	469	4	195520 203120
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 39.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A7SW (S)	505	4	195558 203071
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A7SW (S)	526	4	195581 203042
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 134.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A7SW (S)	529	4	195574 203041
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 99.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A4NW (SE)	602	4	196126 202795

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 99.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A4NW (SE)	608	4	196222 202771
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 74.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A3NE (S)	615	4	195646 202929
49	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 91.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A3NE (S)	615	4	195646 202929
50	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 34.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A4NE (SE)	623	4	196337 202751
51	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 28.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A4NE (SE)	640	4	196313 202734
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 261.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A4NE (SE)	656	4	196333 202718
53	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 77.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A4NE (SE)	712	4	196564 202711
54	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 128.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A4SE (SE)	763	4	196562 202656
55	OS Water Network Lines Watercourse Form: Tidal river Watercourse Length: 325.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford North and St Brides North Primacy: 1	A15NE (N)	844	4	195920 204849

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
56	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 23.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A4SE (SE)	852	4	196486 202541
57	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 245.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A4SE (SE)	861	4	196509 202538
58	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 35.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A3SE (S)	959	4	195688 202557
59	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 22.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembok Primacy: 1	A3SE (S)	994	4	195685 202522

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
60	<p>Historical Landfill Sites</p> <p>Licence Holder: Not Supplied Location: Pembroke Dock Name: Sykemoor Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14377 First Input Date: 31st December 1960 Last Input Date: 31st December 1969 Specified Waste Type: Deposited Waste included Inert, Industrial, Commercial, Household and Special Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6845/0080 BGS Ref: Not Supplied Other Ref: Not Supplied</p>	A4SE (SE)	777	2	196493 202620
61	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: PB3490HV Location: Unit 41, The Dockyard, Pembroke Dock, Pembrokeshire, Pembrokeshire, SA72 6TD Operator Name: Sundorne Products (Ilanidloes) Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Not Supplied Licence Status: Effective Issued: 12th February 2016 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SE)	0	2	195739 203688
61	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 900102 Location: Pembroke Dock, The Dockyard, Pembroke Dock, Pembrokeshire, SA72 6TD Operator Name: Sundorne Products (Ilanidloes) Ltd Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Household, Commercial And Industrial Transfer Stations Licence Status: Modified Issued: 16th January 2015 Last Modified: 10th August 2015 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A7NE (SE)	0	2	195739 203688
62	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 100411 Location: Dockyard Motors, The Old Dockyard, Pembroke Dock, SA72 6TE Operator Name: Gaze James Richard Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Metal Recycling Sites (Mixed) Licence Status: Issued Issued: 21st November 2008 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A11SE (NE)	0	2	195788 203817

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
63	<p>Licensed Waste Management Facilities (Locations)</p> <p>Licence Number: 34263 Location: Celtic Buildings, The Old Royal Dock, Edgar Morgan Way, Pembroke Dock, Pembrokeshire, SA72 6TE Operator Name: David Sean Waters & Bernard Finnegan Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: End of Life Vehicles Licence Status: Revoked Issued: 25th July 2005 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: 17th March 2011 Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A7NE (E)	0	2	195844 203675
	<p>Local Authority Landfill Coverage</p> <p>Name: Pembrokeshire County Council - Has supplied landfill data</p>		0	5	195687 203729
64	<p>Local Authority Recorded Landfill Sites</p> <p>Location: Sykemoor, Pembroke Dock Reference: Not Supplied Authority: Pembrokeshire County Council, Environmental Health Department Last Reported Status: Closed Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Located by supplier to within 10m Boundary Quality: Not Applicable</p>	A4SE (SE)	964	5	196580 202450
65	<p>Potentially Infilled Land (Water)</p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1869</p>	A11SW (W)	0	-	195617 203747
66	<p>Potentially Infilled Land (Water)</p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964</p>	A8SE (SE)	88	-	196350 203299
67	<p>Potentially Infilled Land (Water)</p> <p>Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1869</p>	A12SE (E)	225	-	196600 203751
68	<p>Registered Landfill Sites</p> <p>Licence Holder: Govan Davis Developments Ltd Licence Reference: WDL/3/85 Site Location: Dry Dock & Part Of West Llanion Pill, Pembroke Dock, Pembrokeshire Licence Easting: 196650 Licence Northing: 203730 Operator Location: Sunderland House, The Dockyard, Pembroke Dock, Pembrokeshire Authority: Environment Agency Wales, South West Area Site Category: Landfill Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st October 1986 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Stone, Brick, Hardcore, Concrete Prohibited Waste: Hazardous Wastes Liquid Wastes Metal Paper Plastics Toxic/Poisonous Wastes Wood</p>	A12SE (E)	178	3	196550 203730



Hazardous Substances

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
69	Explosive Sites Name: Pembroke Port/Milford Haven Port Authority Location: Royal Dockyard, Pembroke Dock, Pembroke, Pembrokeshire Status: Active Positional Accuracy: Manually positioned to the address or location	A12SW (E)	0	6	196066 203877

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Dinantian Rocks (Undifferentiated)	A11SE (NW)	0	1	195687 203729
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SE (NW)	0	1	195687 203729
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: no data Cadmium Concentration: <1.8 mg/kg Chromium Concentration: no data Lead Concentration: <100 mg/kg Nickel Concentration: no data	A11SW (NW)	9	1	195485 203968
70	BGS Recorded Mineral Sites Site Name: Pembroke Dock Location: Old Dock Yardcommercial Row, Pembroke Dock, Dyfed, Sa72 6ju Source: British Geological Survey, National Geoscience Information Service Reference: 10797 Type: Wharf Status: Active Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Quaternary Geology: Marine Deposits Commodity: Marine Sand And Gravel Positional Accuracy: Located by supplier to within 100m	A11SE (NE)	0	1	195800 203900
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	195687 203729
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NW (W)	0	1	195559 203710
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (N)	0	1	195758 203959
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	195687 203729
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A7NW (W)	0	1	195559 203710
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11SE (N)	0	1	195758 203959
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	195687 203729

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NE (S)	0	1	195636 203566
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	195687 203729
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A12SW (E)	27	1	196185 203918
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NW (SW)	46	1	195543 203554
	Potential for Ground Dissolution Stability Hazards Hazard Potential: High Source: British Geological Survey, National Geoscience Information Service	A7NE (S)	82	1	195655 203477
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NE (S)	129	1	195688 203413
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	195687 203729
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NW (SW)	91	1	195535 203501
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	195687 203729
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A7NW (W)	0	1	195559 203710
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11SE (N)	0	1	195758 203959
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7NW (W)	0	1	195559 203710
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (N)	0	1	195758 203959
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	195687 203729
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Higher probability radon area (10 to 30% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	195687 203729
	Radon Potential - Radon Protection Measures Protection Measure: Full radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A11SE (NW)	0	1	195687 203729

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
71	Contemporary Trade Directory Entries Name: Paradise Road Resto Location: Building 28 (Workshop), Pembroke Dock, SA72 6TB Classification: Classic Car Specialists Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A7NW (SW)	0	-	195606 203590
71	Contemporary Trade Directory Entries Name: Power Master Systems Location: Stable 5, The Dockyard, Pembroke Dock, Dyfed, SA72 6TB Classification: Electrical Goods Sales, Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A7NW (SW)	0	-	195618 203610
72	Contemporary Trade Directory Entries Name: Merseyside Ship Stores Location: Building 16 North The Dockyard, Pembroke Dock, Dyfed, SA72 6TD Classification: Chandlers Status: Active Positional Accuracy: Manually positioned within the geographical locality	A12SW (E)	0	-	196034 203820
72	Contemporary Trade Directory Entries Name: Pembroke Port Location: The Dockyard, Pembroke Dock, Dyfed, SA72 6TD Classification: Ports, Docks & Harbours Status: Active Positional Accuracy: Automatically positioned to the address	A12SW (E)	0	-	196034 203820
72	Contemporary Trade Directory Entries Name: Carna Location: The Dockyard, Pembroke Dock, Dyfed, SA72 6TD Classification: Cabinet Makers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SW (E)	0	-	196034 203820
72	Contemporary Trade Directory Entries Name: Jay Davidson Haulage Location: The Dockyard, Pembroke Dock, Dyfed, SA72 6TD Classification: Road Haulage Services Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A12SW (E)	0	-	196066 203844
73	Contemporary Trade Directory Entries Name: Cape Engineering Services Location: Pillar Building, The Dockyard, Pembroke Dock, SA72 6TD Classification: Mechanical Engineers Status: Active Positional Accuracy: Automatically positioned to the address	A8NW (E)	0	-	196044 203657
74	Contemporary Trade Directory Entries Name: Interclamp Location: Units A-b, Meyrick Owen Way, Pembroke Dock, SA72 6WS Classification: Staircase, Balustrade & Handrail Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A8NW (E)	0	-	196263 203549
74	Contemporary Trade Directory Entries Name: Grainger Tubolt Location: Units A-b, Meyrick Owen Way, Pembroke Dock, SA72 6WS Classification: Engineering Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NW (E)	0	-	196263 203549
75	Contemporary Trade Directory Entries Name: Jacobs Catalytic (Uk) Ltd Location: The Dockyard, Pembroke Dock, Dyfed, SA72 6TA Classification: Mechanical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A11SE (E)	0	-	195811 203719
76	Contemporary Trade Directory Entries Name: C E N Lewis Group Location: The Dockyard, Pembroke Dock, SA72 6TD Classification: Car Dealers - Used Status: Active Positional Accuracy: Automatically positioned to the address	A11SE (NE)	0	-	195786 203837
76	Contemporary Trade Directory Entries Name: Gwinnutt Ltd Location: The Dockyard, Pembroke Dock, Dyfed, SA72 6TA Classification: Electrical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address	A11SE (NE)	0	-	195786 203837

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
77	Contemporary Trade Directory Entries Name: Mainstay Marine Solutions Location: The Dockyard, Pembroke Dock, Dyfed, SA72 6TE Classification: Ship Builders, Repairs & Fittings Status: Active Positional Accuracy: Automatically positioned to the address	A11SE (NE)	0	-	195900 203890
77	Contemporary Trade Directory Entries Name: Mustang Marine Location: The Dockyard, Pembroke Dock, Dyfed, SA72 6TE Classification: Ship Builders, Repairs & Fittings Status: Inactive Positional Accuracy: Automatically positioned to the address	A11SE (NE)	0	-	195900 203890
77	Contemporary Trade Directory Entries Name: G Autos Location: The Dockyard, Pembroke Dock, Dyfed, SA72 6TE Classification: Garage Services Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A11SE (NE)	0	-	195924 203912
77	Contemporary Trade Directory Entries Name: Jensen Metals Location: The Dockyard, Pembroke Dock, Dyfed, SA72 6TE Classification: Scrap Metal Merchants Status: Active Positional Accuracy: Manually positioned within the geographical locality	A11SE (NE)	0	-	195862 203874
78	Contemporary Trade Directory Entries Name: Port Pallets (Pembroke) Ltd Location: The Dockyard, Pembroke Dock, Dyfed, SA72 6TA Classification: Pallets, Crates & Packing Cases Status: Inactive Positional Accuracy: Automatically positioned to the address	A11SE (NE)	0	-	195727 203791
78	Contemporary Trade Directory Entries Name: Robco Engineering Location: The Dockyard, Pembroke Dock, SA72 6TD Classification: Engineering Machine Services Status: Active Positional Accuracy: Automatically positioned to the address	A11SE (NE)	0	-	195731 203802
79	Contemporary Trade Directory Entries Name: Movin-On (Uk) Ltd Location: Custom House, The Dockyard, Pembroke Dock, Dyfed, SA72 6TW Classification: Road Haulage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SW (E)	0	-	196024 203741
79	Contemporary Trade Directory Entries Name: Dockyard Motors Location: The Dockyard, Pembroke Dock, Dyfed, SA72 6TE Classification: Car Breakers & Dismantlers Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A12SW (E)	0	-	195991 203733
80	Contemporary Trade Directory Entries Name: Mikado Location: Edgar Morgan Way,1 The Dockyard, Pembroke Dock, Dyfed, SA72 6TE Classification: Car Dealers - Used Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A7NE (SE)	0	-	195844 203662
81	Contemporary Trade Directory Entries Name: Celtic Biodiesel Ltd Location: The Royal Dockyard, Pembroke Dock, Dyfed, SA72 6TD Classification: Oil Fuel Distributors Status: Inactive Positional Accuracy: Manually positioned within the geographical locality	A8NW (SE)	0	-	196172 203468
82	Contemporary Trade Directory Entries Name: Tarmac Location: United Marine Aggregates,Commercial Row Pembroke Road, Pembroke Dock, Dyfed, SA72 6JU Classification: Sand, Gravel & Other Aggregates Status: Active Positional Accuracy: Manually positioned within the geographical locality	A8NE (E)	44	-	196396 203644

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	Contemporary Trade Directory Entries Name: South Wales Sand & Gravel Location: Commercial Row, Pembroke Dock, Dyfed, SA72 6JU Classification: Sand, Gravel & Other Aggregates Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NE (E)	44	-	196396 203644
83	Contemporary Trade Directory Entries Name: G P Motor Sales Location: Albion Sq, Pembroke Dock, Dyfed, SA72 6XF Classification: Tyre Dealers Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location	A8NE (SE)	131	-	196442 203410
84	Contemporary Trade Directory Entries Name: Universal Engineering Motor Services Location: Park Street, Pembroke Dock, Dyfed, SA72 6JG Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A8NE (E)	249	-	196560 203402
85	Contemporary Trade Directory Entries Name: Pembrokeshire Remapping Location: 11 Park Lane, Pembroke Dock, Dyfed, SA72 6JQ Classification: Car Engine Tuning & Diagnostic Services Status: Active Positional Accuracy: Manually positioned to the road within the address or location	A8NE (E)	301	-	196614 203404
86	Contemporary Trade Directory Entries Name: Pennar Filling Station Location: Treowen Road, Pembroke Dock, Dyfed, SA72 6NY Classification: Petrol Filling Stations Status: Inactive Positional Accuracy: Automatically positioned to the address	A4NE (SE)	537	-	196340 202838
86	Contemporary Trade Directory Entries Name: Rudd Joinery Location: Treowen Road, Pembroke Dock, Dyfed, SA72 6NY Classification: Joinery Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address	A4NE (SE)	537	-	196340 202838
87	Contemporary Trade Directory Entries Name: Pembrokeshire Gas Maintenance Location: 3, Links Drive, Pennar, Pembroke Dock, SA72 6SZ Classification: Boilers - Servicing, Replacements & Repairs Status: Active Positional Accuracy: Automatically positioned to the address	A3NE (S)	766	-	195723 202748
88	Contemporary Trade Directory Entries Name: Jones The Gas Location: 19, Bentlass Terrace, Pennar, Pembroke Dock, SA72 6RL Classification: Gas Appliances - Sales & Service Status: Inactive Positional Accuracy: Automatically positioned to the address	A4SE (SE)	991	-	196323 202383
89	Fuel Station Entries Name: Pennar Filling Station Location: Treowen Road, Pennar, PEMBROKE DOCK, Dyfed, SA72 6NY Brand: Shell Premises Type: Not Applicable Status: Obsolete Positional Accuracy: Automatically positioned to the address	A4NE (SE)	537	-	196340 202838
90	Points of Interest - Commercial Services Name: Croft Motors Location: 7 Bush Street, Pembroke Dock, SA72 6XB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NE (E)	201	7	196510 203390
91	Points of Interest - Education and Health Name: Haven Way Location: Fort Road, Pembroke Dock, SA72 6SY Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A7NE (S)	30	7	195752 203509
91	Points of Interest - Education and Health Name: South Pembroke Hospital Location: Fort Road, Pembroke Dock, SA72 6SY Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A7NE (S)	30	7	195752 203509

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
91	Points of Interest - Education and Health Name: South Pembrokeshire Hospital Location: Fort Road, Pembroke Dock, SA72 6SY Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A7NE (S)	30	7	195752 203509
91	Points of Interest - Education and Health Name: Health & Social Care Resource Centre Location: 139 Fort Road, Pembroke Dock, SA72 6SX Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A7NE (S)	37	7	195778 203494
92	Points of Interest - Manufacturing and Production Name: Tank Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A12SW (E)	0	7	196111 203743
92	Points of Interest - Manufacturing and Production Name: Tank Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A12SW (E)	0	7	196174 203734
92	Points of Interest - Manufacturing and Production Name: Tanks Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SW (E)	0	7	196115 203753
92	Points of Interest - Manufacturing and Production Name: Tanks Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SW (E)	0	7	196174 203734
93	Points of Interest - Manufacturing and Production Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8NW (SE)	0	7	196258 203406
93	Points of Interest - Manufacturing and Production Name: Works Location: SA72 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8NW (SE)	0	7	196258 203407
94	Points of Interest - Manufacturing and Production Name: Tank Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A11SW (W)	0	7	195586 203754
94	Points of Interest - Manufacturing and Production Name: Tank Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A11SW (NW)	0	7	195618 203815
94	Points of Interest - Manufacturing and Production Name: Tank Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A11SW (NW)	0	7	195593 203780
95	Points of Interest - Manufacturing and Production Name: Tank Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A11SE (NW)	0	7	195622 203837

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
95	Points of Interest - Manufacturing and Production Name: Tank Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A11SE (NW)	0	7	195629 203857
96	Points of Interest - Manufacturing and Production Name: Tank Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A11SE (NE)	0	7	195879 203944
97	Points of Interest - Manufacturing and Production Name: Tank Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SE (E)	0	7	196296 203757
98	Points of Interest - Manufacturing and Production Name: Tank Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A3NE (S)	670	7	195832 202816
99	Points of Interest - Public Infrastructure Name: Sewage Works Location: SA72 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A11SW (NW)	0	7	195596 203821
100	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8NE (E)	82	7	196431 203623
100	Points of Interest - Recreational and Environmental Name: Playground Location: Clarence Street, SA72 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8NE (E)	82	7	196431 203623
101	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A4NW (S)	633	7	196020 202798
101	Points of Interest - Recreational and Environmental Name: Playground Location: Owen Street, SA72 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A4NW (S)	633	7	196020 202798
102	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A4SW (SE)	821	7	196275 202553
102	Points of Interest - Recreational and Environmental Name: Playground Location: Ferry Road, SA72 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A4SW (SE)	821	7	196283 202553

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
103	<p>Environmentally Sensitive Areas</p> <p>Name: Preseli (decommissioned) Multiple Areas: Y Total Area (m2): 1187932672 Source: The National Assembly for Wales, GI Services (Department of Planning & Countryside)</p>	A15NW (N)	895	8	195358 204930
104	<p>Sites of Special Scientific Interest</p> <p>Name: Milford Haven Waterway Multiple Areas: Y Total Area (m2): 21920694.53 Source: Natural Resources Wales Reference: 28232wp3 Designation Details: Mixed Biological And Geological Designation Date: 4th March 1993 Date Type: Notified</p>	A7NW (W)	0	2	195573 203705
105	<p>Special Areas of Conservation</p> <p>Name: Pembrokeshire Marine / Sir Benfro Forol Multiple Areas: Y Total Area (m2): 1380663657.58 Source: Natural Resources Wales Reference: UK0013116 Status: Designated</p>	A7NW (W)	0	2	195573 203705













Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Pembrokeshire County Council - Public Protection Division	December 2015	Annual Rolling Update
Discharge Consents Environment Agency - Welsh Region Natural Resources Wales	August 2014 August 2017	Quarterly Quarterly
Enforcement and Prohibition Notices Environment Agency - Welsh Region	March 2013	As notified
Integrated Pollution Controls Environment Agency - Welsh Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control Environment Agency - Welsh Region Natural Resources Wales	October 2017 October 2017	Quarterly Quarterly
Local Authority Integrated Pollution Prevention And Control Pembrokeshire County Council - Environmental Health Department	December 2015	Annual Rolling Update
Local Authority Pollution Prevention and Controls Pembrokeshire County Council - Environmental Health Department	November 2015	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Pembrokeshire County Council - Environmental Health Department	December 2015	Annual Rolling Update
Nearest Surface Water Feature Ordnance Survey	September 2017	
Pollution Incidents to Controlled Waters Environment Agency - Welsh Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - Welsh Region Natural Resources Wales	March 2013 March 2013	As notified As notified
Prosecutions Relating to Controlled Waters Environment Agency - Welsh Region Natural Resources Wales	March 2013 March 2013	As notified As notified
Registered Radioactive Substances Natural Resources Wales Environment Agency - Welsh Region	January 2015 January 2015	As notified
Substantiated Pollution Incident Register Environment Agency Wales - South West Area Natural Resources Wales	October 2017 October 2017	Quarterly Quarterly
Water Abstractions Environment Agency - Welsh Region Natural Resources Wales	October 2017 October 2017	Quarterly Quarterly
Water Industry Act Referrals Environment Agency - Welsh Region Natural Resources Wales	October 2017 October 2017	Quarterly Quarterly
Groundwater Vulnerability Environment Agency - Head Office	April 2015	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Natural Resources Wales	November 2016	As notified
Extreme Flooding from Rivers or Sea without Defences Natural Resources Wales	November 2017	Quarterly

Agency & Hydrological	Version	Update Cycle
Flooding from Rivers or Sea without Defences Natural Resources Wales	November 2017	Quarterly
Areas Benefiting from Flood Defences Natural Resources Wales	November 2017	Quarterly
Flood Water Storage Areas Natural Resources Wales	November 2017	Quarterly
Flood Defences Natural Resources Wales	November 2017	Quarterly
OS Water Network Lines Ordnance Survey	October 2017	6 Weekly
Surface Water 1 in 30 year Flood Extent Natural Resources Wales	October 2013	As notified
Surface Water 1 in 100 year Flood Extent Natural Resources Wales	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent Natural Resources Wales	October 2013	As notified
Surface Water Suitability Natural Resources Wales	October 2013	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually
Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Natural Resources Wales	July 2017	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Welsh Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency Wales - South West Area Natural Resources Wales	October 2017 October 2017	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency Wales - South West Area Natural Resources Wales	October 2017 October 2017	Quarterly Quarterly
Local Authority Landfill Coverage Pembrokeshire County Council - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites Pembrokeshire County Council - Environmental Health Department	May 2000	Not Applicable
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites Environment Agency Wales - South West Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency Wales - South West Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency Wales - South West Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	September 2017	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Pembrokeshire Coast National Park Authority - Development Control Pembrokeshire County Council - Planning Department	February 2016 October 2015	Annual Rolling Update Annual Rolling Update
Planning Hazardous Substance Consents Pembrokeshire Coast National Park Authority - Development Control Pembrokeshire County Council - Planning Department	February 2016 October 2015	Annual Rolling Update Annual Rolling Update
Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2017	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	November 2017	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2017	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	December 2017	Quarterly
Points of Interest - Education and Health PointX	December 2017	Quarterly
Points of Interest - Manufacturing and Production PointX	December 2017	Quarterly
Points of Interest - Public Infrastructure PointX	December 2017	Quarterly
Points of Interest - Recreational and Environmental PointX	December 2017	Quarterly
Underground Electrical Cables National Grid	December 2015	Bi-Annually
Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural Resources Wales	October 2017	Bi-Annually
Areas of Outstanding Natural Beauty Natural Resources Wales	August 2017	Bi-Annually
Environmentally Sensitive Areas The National Assembly for Wales - GI Services (Department of Planning & Countryside)	January 2017	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Pembrokeshire County Council	August 2017	Bi-Annually
Marine Nature Reserves Natural Resources Wales	August 2017	Bi-Annually
National Nature Reserves Natural Resources Wales	August 2017	Bi-Annually
National Parks Natural Resources Wales	August 2017	Annually
Nitrate Vulnerable Zones Natural Resources Wales The National Assembly for Wales - GI Services (Department of Planning & Countryside)	July 2017 October 2005	Bi-Annually
Ramsar Sites Natural Resources Wales	August 2017	Bi-Annually
Sites of Special Scientific Interest Natural Resources Wales	August 2017	Bi-Annually
Special Areas of Conservation Natural Resources Wales	August 2017	Bi-Annually
Special Protection Areas Natural Resources Wales	August 2017	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Natural Resources Wales Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
4	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	Pembrokeshire County Council - Environmental Health Department Public Protection Division, Pembrokeshire County Council, County Hall, Haverfordwest, Pembrokeshire, SA61 1TP	Telephone: 01437 764551 Fax: 01437 775838 Website: www.pembrokeshire.gov.uk
6	Health and Safety Executive 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
7	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
8	The National Assembly for Wales - GI Services (Department of Planning & Countryside) Yr Hen Ysgol Gymraeg, Alexandria Road, Aberystwyth, Ceredigion, SY23 1LD	Telephone: 02920 825111 Website: www.wales.gov.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Other Pits	Orchard	Marsh	Brushwood	Rough Pasture	Trigonometrical Station	Bench Mark	Well, Spring, Boundary Post			Instrumental Contour	Fenced Un-Fenced	Fenced Un-Fenced	Raised Road	Railway over River	Level Crossing	Road over Stream	
Gravel Pit	Quarry	Osiers	Mixed Wood	Fir	Arrow denotes flow of water	Site of Antiquities	Pump, Guide Post, Signal Post	Surface Level									

Ordnance Survey Plan 1:10,000

Gravel Pit	Disused Pit or Quarry	Lake, Loch or Pond	Boulders	Non-Coniferous Trees	Scrub	Heath	Reeds	Direction of Flow of Water								
Chalk Pit, Clay Pit or Quarry	Sand Pit	Refuse or Slag Heap	Dunes	Coniferous Trees	Orchard	Bracken	Marsh	Building	Glasshouse	Sloping Masonry	Pylon	Electricity Transmission Line	Standard Gauge Multiple Track	Standard Gauge Single Track	Siding, Tramway or Mineral Line	Narrow Gauge

1:10,000 Raster Mapping

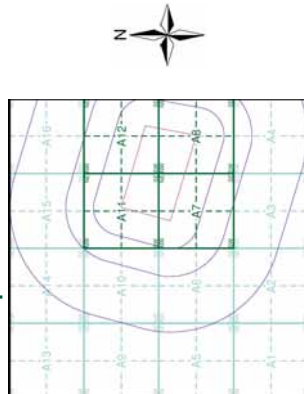
Refuse tip or slag heap	Rock (scattered)	Boulders (scattered)	Mud	Sand Pit	Top of cliff	Underground detail	Narrow gauge railway	Single track railway	Civil, parish or community boundary	Constituency boundary	Non-coniferous trees	Coniferous trees	Positioned tree	Coppice or Osiers	Heath	Marsh, Salt Marsh or Reeds	Flow arrows	
Gravel Pit	Rock	Boulders	Shingle	Sand	Slopes	General detail	Overhead detail	Multi-track railway	County boundary (England only)	District, Unitary, Metropolitan, London Borough boundary	Area of wooded vegetation	Non-coniferous trees (scattered)	Coniferous trees (scattered)	Positioned tree	Coppice or Osiers	Heath	Marsh, Salt Marsh or Reeds	

RPS

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Pembrokeshire	1:10,560	1869	3
Pembrokeshire	1:10,560	1909	4
Milford Haven	1:5,000	1950	5
Pembroke	1:10,000	1950	6
Pembrokeshire	1:10,560	1953	7
Ordnance Survey Plan	1:10,000	1964	8
Ordnance Survey Plan	1:10,000	1966 - 1968	9
Ordnance Survey Plan	1:10,000	1970 - 1976	10
Ordnance Survey Plan	1:10,000	1977	11
Ordnance Survey Plan	1:10,000	1985	12
Ordnance Survey Plan	1:10,000	1992 - 1994	13
10K Raster Mapping	1:10,000	2000	14
10K Raster Mapping	1:10,000	2006	15
VectorMap Local	1:10,000	2017	16

Historical Map - Slice A



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



A Landmark Information Group Service v50.0 12-Jan-2018 Page 1 of 16
 Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

	Government and Administrative Buildings		Military and Industrial Buildings
	Military and Communication Areas		Subway Entrance
	Fireproof Building		Prominent Fireproof Building
	Non-fireproof Building (non-dwelling)		Factory, mill, and flour mill, with chimneys
	Power Station, drawn to scale		Telephone Station, drawn to scale
	Abandoned Open-pit Mine or Quarry		Open-pit Salt Mine
	Oil Deposit or Well		Oil Seepage
	Fuel Storage Tanks		Natural Gas Tank
	Drill Hole		Triangulation Point on Burial Mound
	Burial Mound		Single-track Railroad
	Railroad and Station Building		Double-track Railroad
	Coniferous Forest		Deciduous Forest
	Mixed Forest		Scattered Vegetation
	Lawns		Citrus Orchard
	Wet Ground		

243.8 Values for prominent elevations
 180.0 Numbers for spot elevations, depth soundings, contour lines, etc.
 0.2 Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	Ъ ъ (-)
Д д (D)	Л л (L)	У у (U)	Ы ы (Y)
Е е (E)	М м (M)	Ф ф (F)	Ь ь (-)
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

	Government and Administrative Buildings		Military and Industrial Buildings
	Military and Communication Areas		Subway Entrance
	Partly Demolished Buildings		Demolished Buildings
	Built-Up Area with Fireproof Buildings		Built-Up Area with Non-Fireproof Buildings
	Prominent Building		Prominent Industrial Building
	Individual Dwelling		Ruins of an Individual Dwelling
	Fireproof		Dwelling
	Factory or Mill with Chimney		Mine or Open Pit Mine without Chimney
	Operating Shaft or Mine		Salt Mine
	Stone Quarry		Gas Pump or Service Station
	Small Hydroelectric Power Station		Transformer Station
	Burial Mound (height in metres)		Triangulation Point on Burial Mound
	Bench Mark (monumented)		Telegraph Office
	Radio Station		Airfield or Seaplane Base
	Radio Tower		Landing Strip
	Small Bridge		Width of Road
	Culvert		Steep Grade
	Double-track Railroad with First Class Station		Improved Dirt Road (former truck road)
	Shore Embankment		Dismantled Railroad
	Water Reservoir		Railroad Under Construction
	Well		Water Gauge
	Contour Line		Direction and velocity of current
	Heavy (Index) Contour Line		Water Level Mark
	Deciduous		Isobath with value
	Mixed		Spot Elevation
	Scrub		Water Level Mark

Key to Numbers on Mapping

No.	Description
1	Military Battery
2	Hydro Airfield/Airport
3	Hospital
4	Dockyard
5	Factory (Gas)
6	Sawmill
7	Radio Mast
8	Storage (Fuel)
9	Fort
10	Church

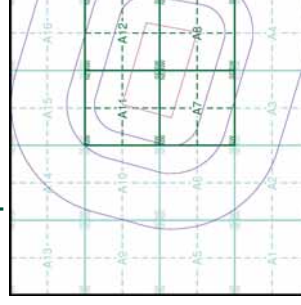
SM90SE_Pembroke

Mapping Type	Scale	Date	Pg
Pembrokeshire	1:10,560	1869	3
Pembrokeshire	1:10,560	1909	4
Milford Haven	1:5,000	1950	5
Pembroke	1:10,000	1950	6
Pembrokeshire	1:10,560	1953	7
Ordnance Survey Plan	1:10,000	1964	8
Ordnance Survey Plan	1:10,000	1966 - 1968	9
Ordnance Survey Plan	1:10,000	1970 - 1976	10
Ordnance Survey Plan	1:10,000	1977	11
Ordnance Survey Plan	1:10,000	1985	12
Ordnance Survey Plan	1:10,000	1992 - 1994	13
10K Raster Mapping	1:10,000	2000	14
10K Raster Mapping	1:10,000	2006	15
VectorMap Local	1:10,000	2017	16

Historical Mapping & Photography included:



Russian Map - Slice A



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Site: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Pembrokeshire Published 1869

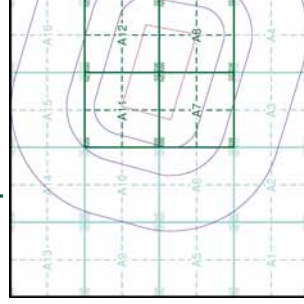
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey, in Great Britain and Ireland in the 1840's. In 1854 the Ordnance Survey published the first 1:10,560 maps. These maps were used to update the 1:10,560 maps. The published data then there are often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in cutting areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
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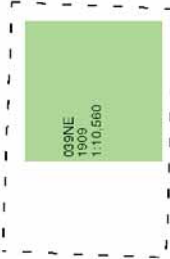
Pembrokeshire

Published 1909

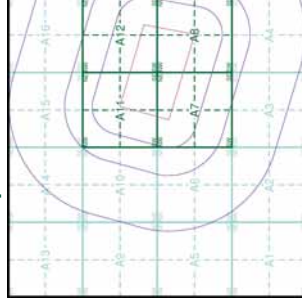
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey archives in the 1940's. In 1854 the Ordnance Survey was established and its maps were used to update the 1:10,560 maps. The published data is then there are often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in cutting areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

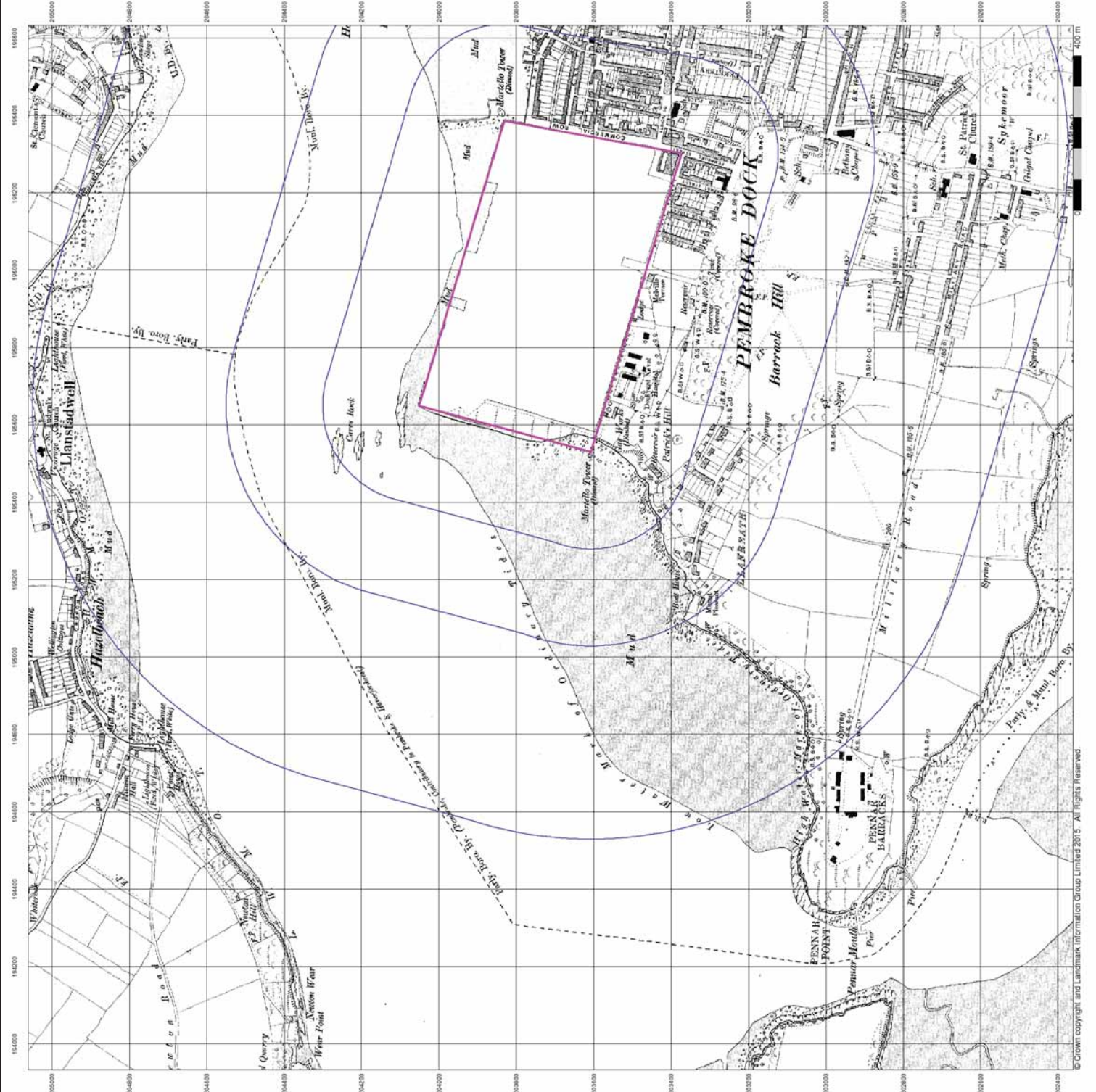
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Site: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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Milford Haven

Published 1950

Source map scale - 1:5,000

These maps were produced by the Russian military during the Cold War between 1950 and 1957, at 1:25,000, 1:10,000 and 1:5,000 scales, and show detailed features with colour-coded areas for development, parks, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.

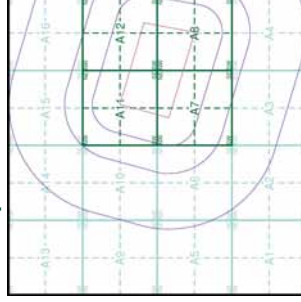
They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs (or use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)

SM50NW
1950
1:5,000

SM50SW
1950
1:5,000

Russian Map - Slice A



Order Details

Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730

Site Area (Ha): 36.27
Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Pembroke

Published 1950

Source map scale - 1:10,000

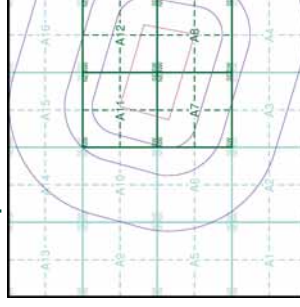
These maps were produced by the Russian military during the Cold War between 1950 and 1957, at 1:25,000, 1:10,000 and 1:5,000 scales, and show detailed features, with colour-coded areas for development, roads, and non-developed areas. Buildings are coloured black and important buildings (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.

They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)

- SM60NE 1950 1:10,000
- SM60SE 1950 1:10,000

Russian Map - Slice A



Order Details

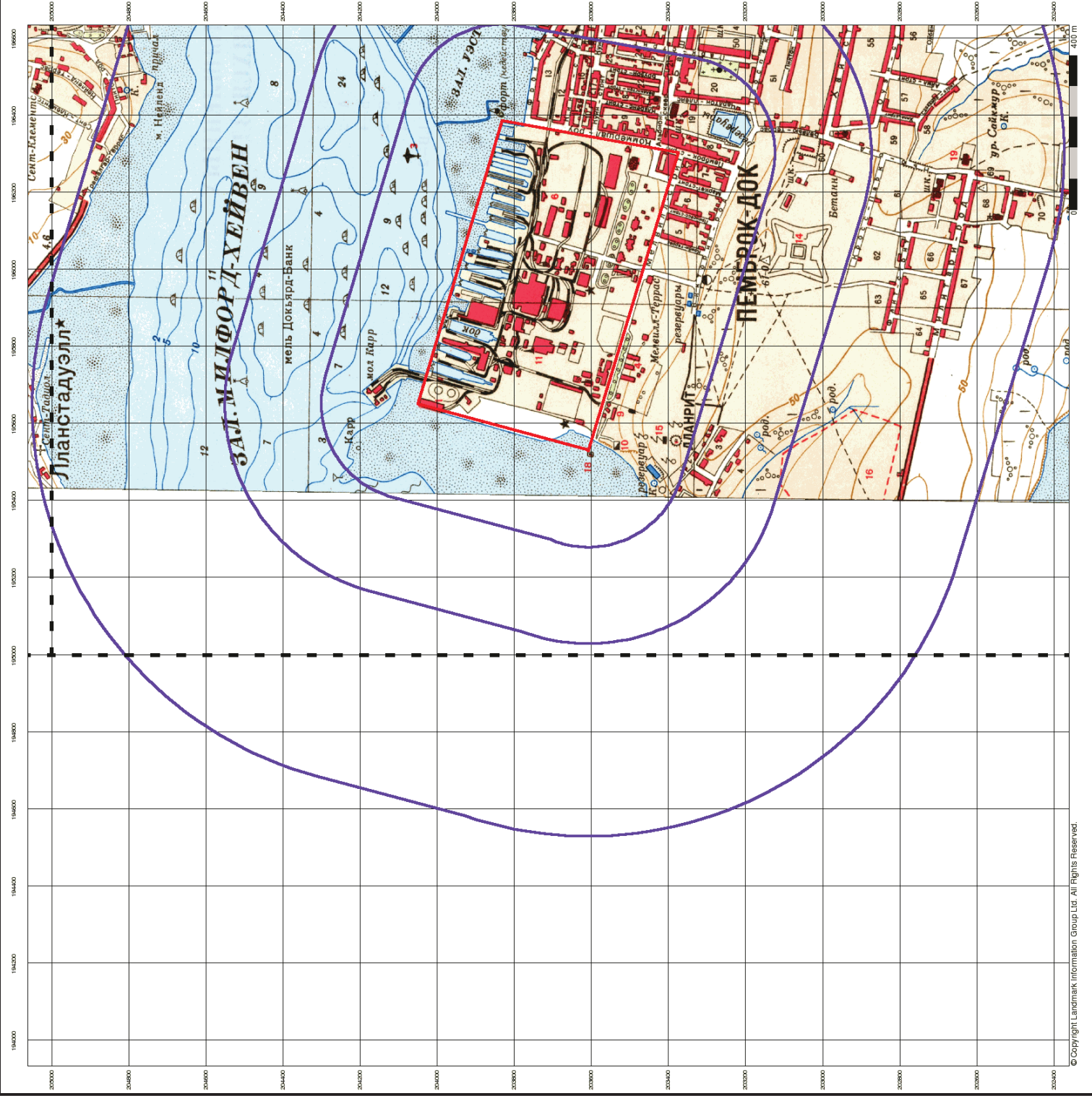
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Site: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

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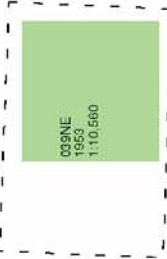
Pembrokeshire

Published 1953

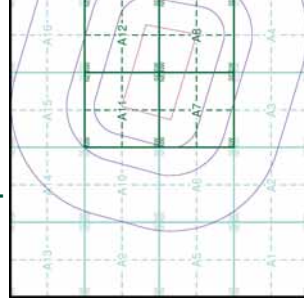
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey, and produced in the 1840's. In 1854 the Ordnance Survey, in England, Wales and Scotland, began to use the Cassini Projection. The published maps were then updated to the 1:10,560 scale. The published maps were often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Ordnance Survey Plan Published 1964

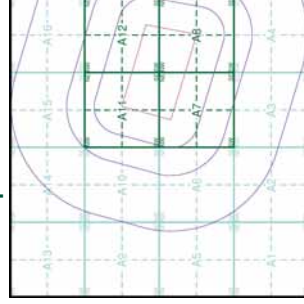
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey offices in England, Wales and Scotland in the 1840's. In 1854 at a scale of 1:2500, the maps were re-surveyed and the data used to update the 1:10,000 maps. The published data is then there are often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,000 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SM60NW	SM60NE
1964	1964
1:10,000	1:10,000
SM60SW	SM60SE
1964	1964
1:10,000	1:10,000

Historical Map - Slice A



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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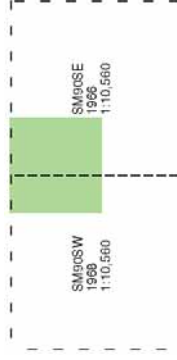


Ordnance Survey Plan Published 1966 - 1968

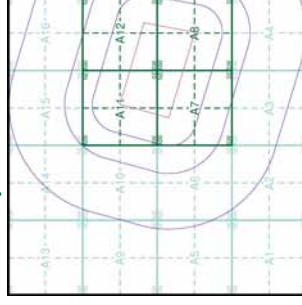
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey offices in Southampton in the 1940's. In 1854 the Ordnance Survey was established in England, Wales and Scotland. The maps shown here were used to update the 1:10,000 maps. The published data from these maps are often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in cutting areas. In the late 1940's a Provisional Edition was produced, which updated the 1:10,000 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Site: A
Site Area (Ha): 36.27
Search Buffer (m): 1000

Site Details

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Ordnance Survey Plan Published 1970 - 1976

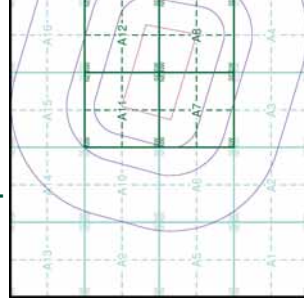
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at a scale of 1:10,000 for England, Wales and Scotland in the 1940's. In 1954 at a scale of 1:25,000. The maps were reproduced from the original maps used to update the 1:10,560 maps. The published data is then there are used some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SM6BNW	SM6ONE
1970	1975
1:10,560	1:10,000
SM6DSW	SM6DSE
1976	1971
1:10,000	1:10,000

Historical Map - Slice A



Order Details

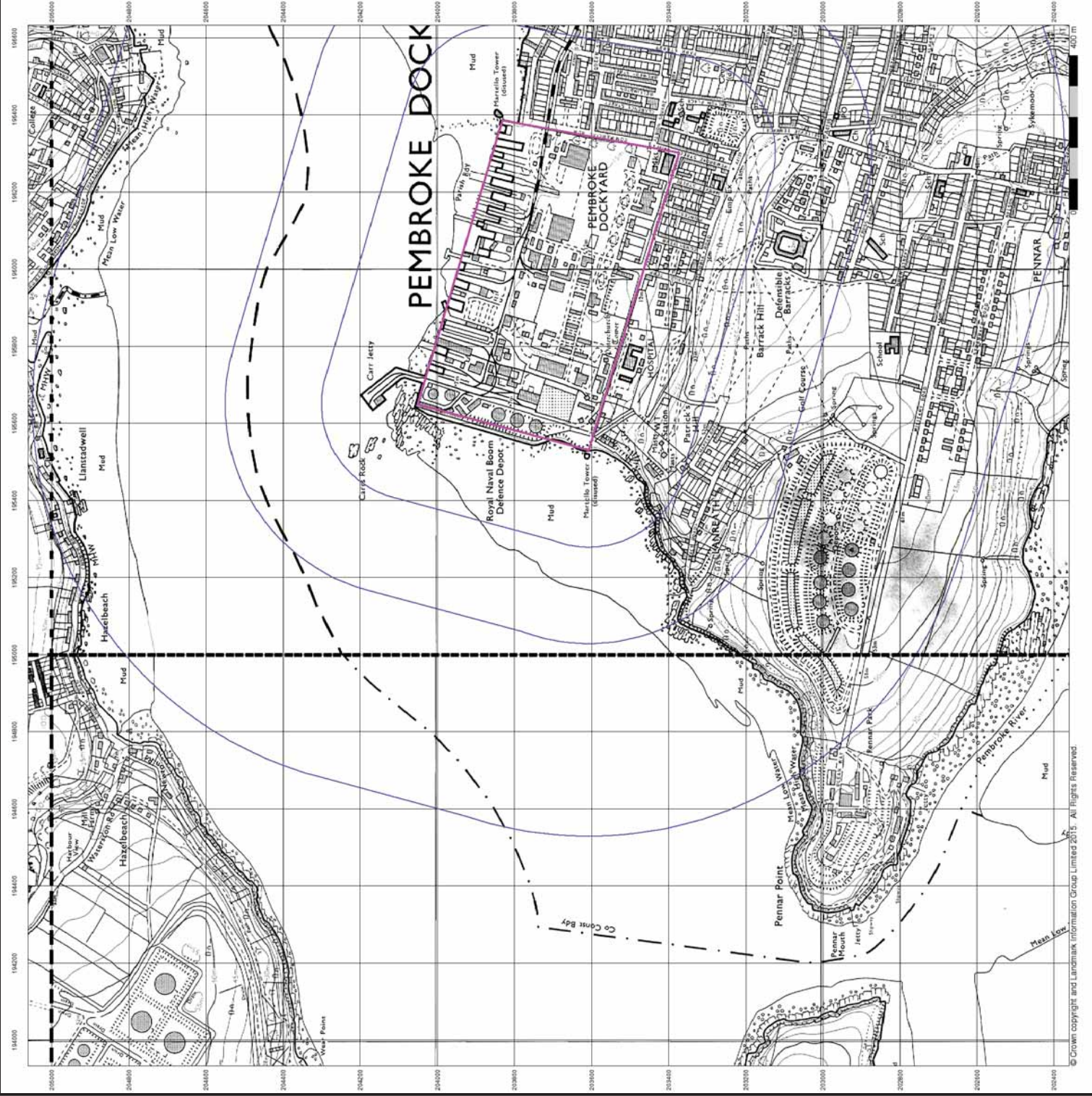
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
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Ordnance Survey Plan Published 1977

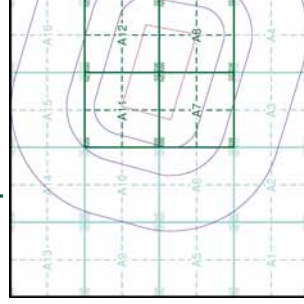
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey, Warley, Birmingham, in the 1940's. In 1854 the Ordnance Survey was established in England, Wales and Scotland. The maps were produced for the Ordnance Survey, Warley, Birmingham, in the 1940's. The maps are used to update the 1:10,000 maps. The published data is then used to update the maps. The maps are often some years later than the surveyed data. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in cutting areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,000 mapping from a number of sources. The maps appear 'unfinished' - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

- - - - - SIMONNW
- - - - - 1977
- - - - - 1:10,000

Historical Map - Slice A



Order Details

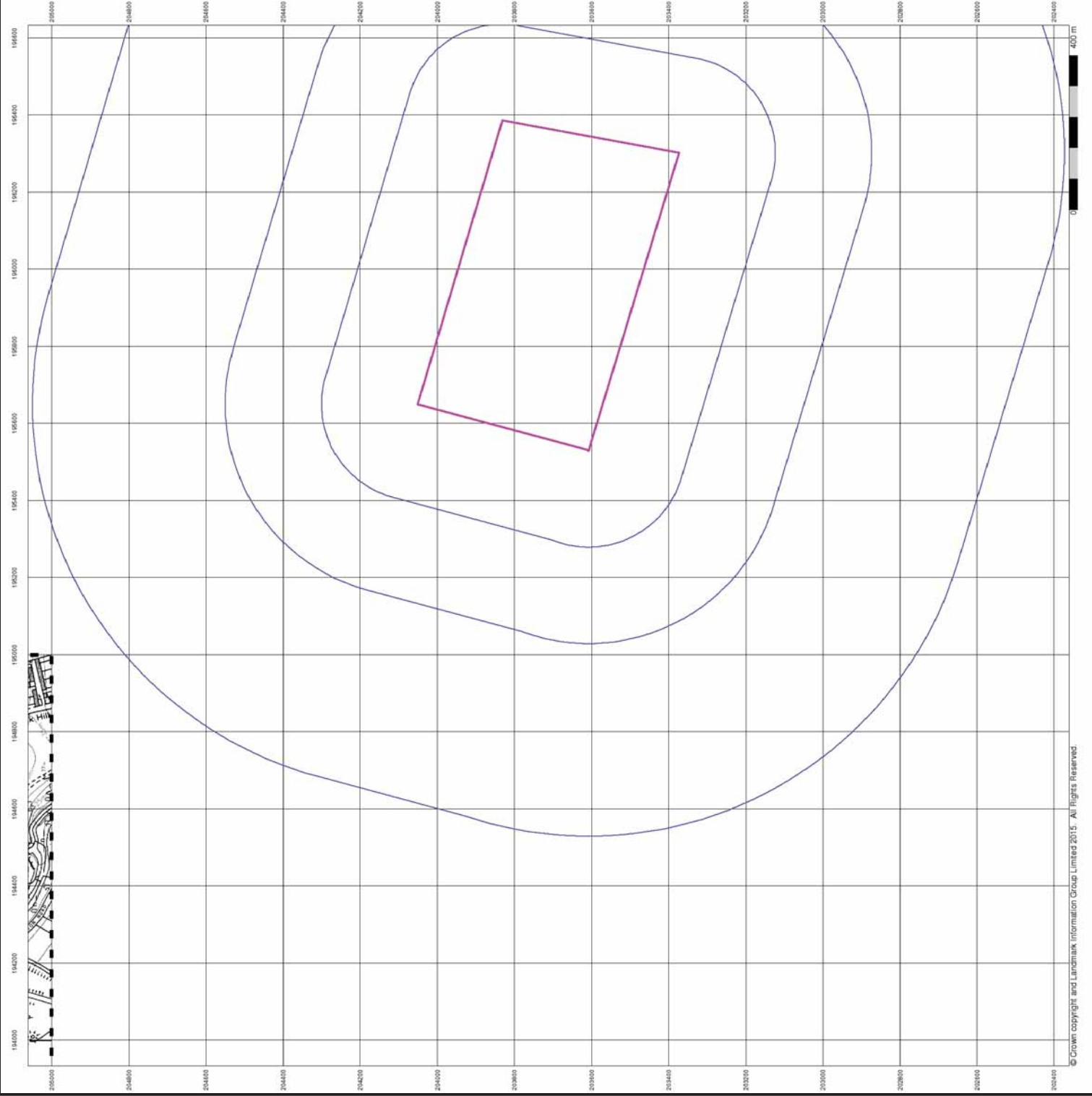
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 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
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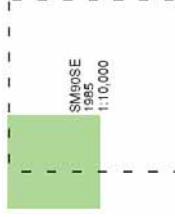


Ordnance Survey Plan Published 1985

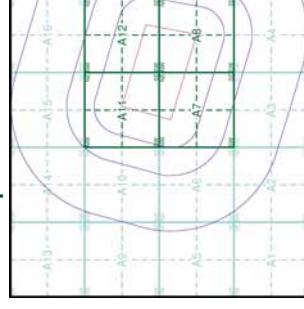
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey, Exeter and Scotland in the 1840's. In 1854 the Ordnance Survey published the first 1:10,000 maps. These maps are often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,000 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

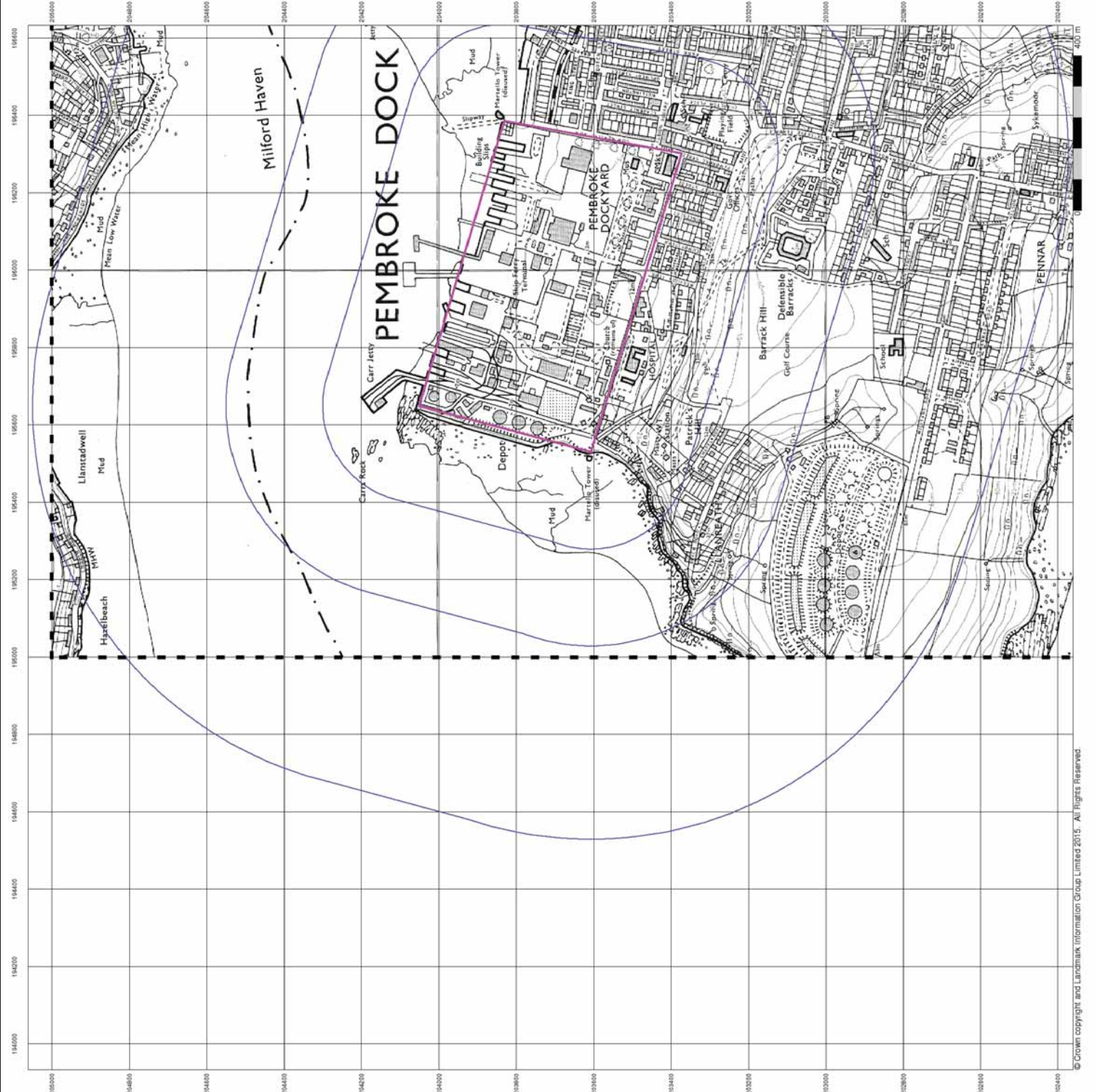
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 1000

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Ordnance Survey Plan Published 1992 - 1994

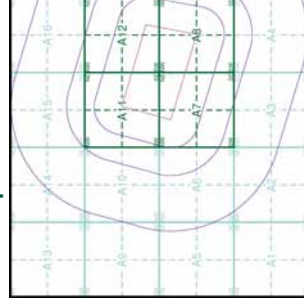
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey offices in England, Wales and Scotland in the 1840's. In 1854 at a scale of 1:2500, the maps were updated with the 1:10,000 scale. The maps are used to update the 1:10,000 maps. The published data is then there are often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,000 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

- SM60NW 1992 1:10,000
- SM60SW 1994 1:10,000
- SM60SE 1993 1:10,000

Historical Map - Slice A



Order Details

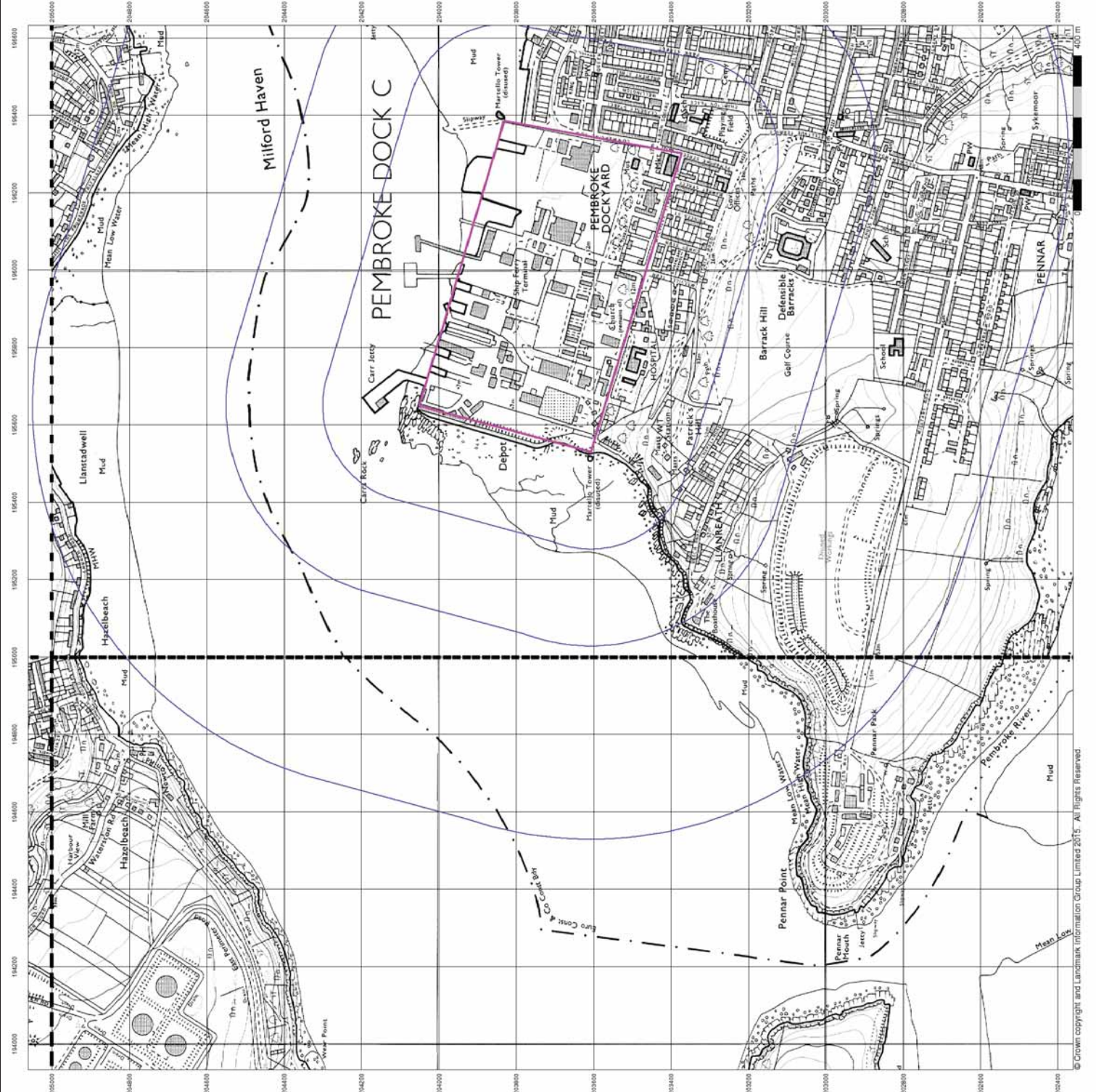
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
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10k Raster Mapping

Published 2000

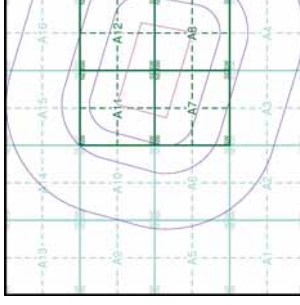
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from plan data which was digitised in 1970. The maps are published at a scale of 1:10,000. The maps show buildings, roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depicted includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

SM60NW	2000	1:10,000
SM60NE	2000	1:10,000
SM60SW	2000	1:10,000
SM60SE	2000	1:10,000

Historical Map - Slice A



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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10k Raster Mapping

Published 2006

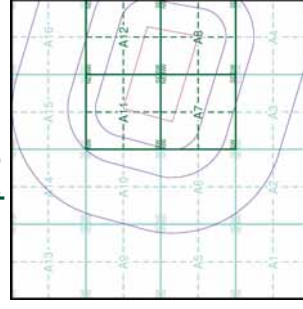
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster mapping. These maps are derived from plan data which was digitised at a scale of 1:10,000. The data is highly detailed showing buildings, roads and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depicted includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

SM60NW	2006	1:10,000
SM60NE	2006	1:10,000
SM60SW	2006	1:10,000
SM60SE	2006	1:10,000

Historical Map - Slice A



Order Details

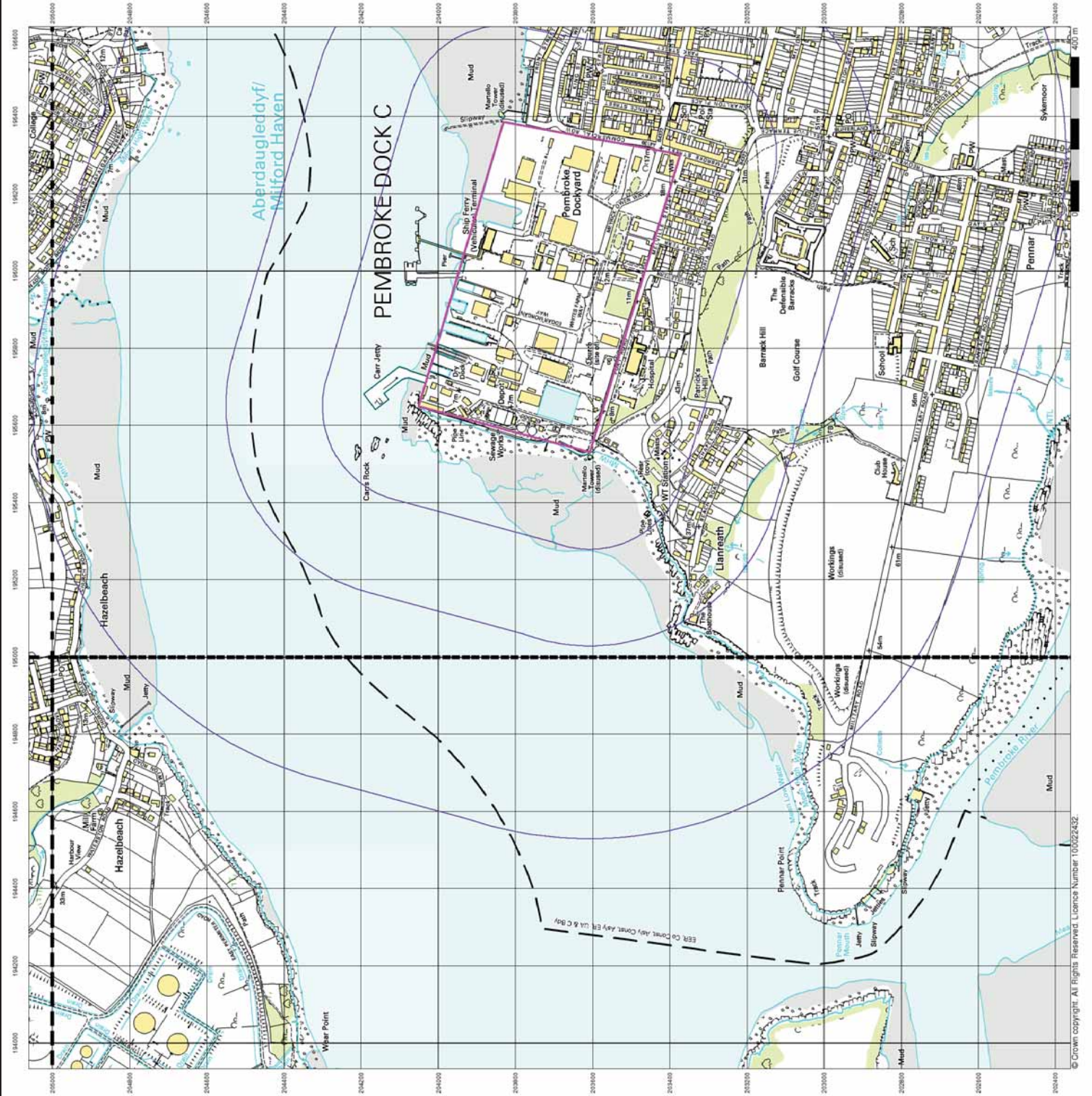
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk





VectorMap Local Published 2017

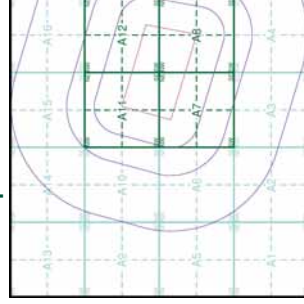
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a vector data set at a scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical OS VectorMap Local. It is derived from large-scale information surveyed at 1:250 scale (covering major towns and cities), 1:2500 scale (smaller towns, villages and developed rural areas), and 1:10,000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)

SM90NW	2017	Variable
SM90SE	2017	Variable

Historical Map - Slice A



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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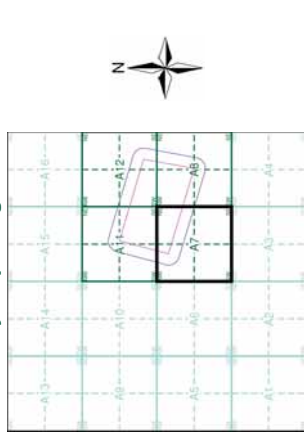


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- General**
- Specified Site
 - Several of Type at Location
 - Contaminated Land Register Entry or Notice (Location)
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Local Authority Integrated Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control Enforcement
 - Pollution Incident to Controlled Waters
 - Prosecution Relating to Authorised Processes
 - Prosecution Relating to Controlled Waters
 - Registered Radioactive Substance
 - River Network or Water Feature
 - River Quality Sampling Point
 - Substantiated Pollution Incident Register
 - Water Abstraction
 - Water Industry Act Referral
- Agency and Hydrological**
- Bearing Reference Point
 - Overhead Transmission Line
 - BOS Recorded Landfill Site (Location)
 - BOS Recorded Landfill Site
 - EA Historic Landfill (Buried Point)
 - EA Historic Landfill (Polygon)
 - Water Pollution Control Registered Waste Site
 - Licensed Waste Management Facility (Landfill Boundary)
 - Licensed Waste Management Facility (Location)
 - Local Authority Recorded Landfill Site (Location)
 - Local Authority Recorded Landfill Site
 - Potentially Infiltrated Land (Non-water)
 - Potentially Infiltrated Land (Non-water)
 - Potentially Infiltrated Land (Non-water)
 - Potentially Infiltrated Land (Water)
 - Potentially Infiltrated Land (Water)
 - Potentially Infiltrated Land (Water)
 - Registered Landfill Site
 - Registered Landfill Site (Location)
 - Registered Landfill Site (Point buffered to 10m)
 - Registered Landfill Site (Point buffered to 25m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site (Location)
 - Registered Waste Treatment or Disposal Site
- Hazardous Substances**
- COMAH Site
 - NHHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
- Geological**
- BOS Recorded Mineral Site

Site Sensitivity Map - Segment A7



Order Details

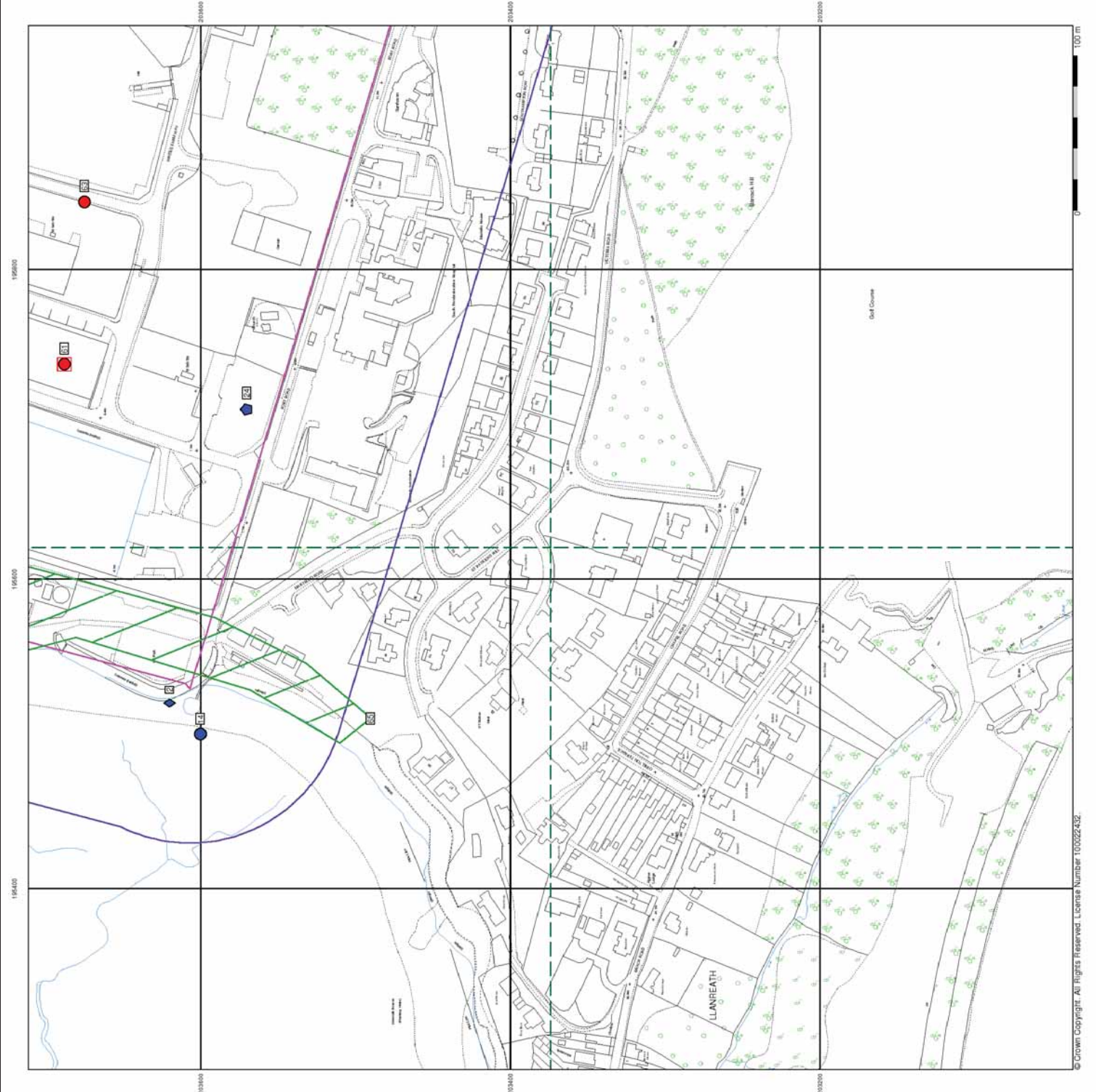
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 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Plot Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD

Landmark
 an ORIGINATOR GROUP

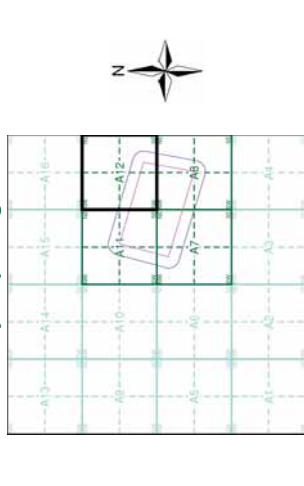
Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk





- General**
- Specified Site
 - Bearing Reference Point
 - Overhead Transmission Line
 - Several of Type at Location
 - Pylon
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
 - BOS Recorded Landfill Site (Location)
 - Contaminated Land Register Entry or Notice
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Local Authority Integrated Pollution Control and Control
 - Local Authority Pollution Prevention and Control
 - Local Authority Recorded Landfill Site (Location)
 - Local Authority Recorded Landfill Site
 - Potentially Infiltrated Land (Non-water)
 - Potentially Infiltrated Land (Non-water)
 - Potentially Infiltrated Land (Non-water)
 - Potentially Infiltrated Land (Water)
 - Potentially Infiltrated Land (Water)
 - Potentially Infiltrated Land (Water)
 - Potentially Infiltrated Land (Water)
 - Registered Landfill Site
 - Registered Landfill Site (Location)
 - Registered Landfill Site (Peak Surface to 10m)
 - Registered Landfill Site (Peak Surface to 25m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Treatment or Disposal Site (Location)
 - Registered Waste Treatment or Disposal Site
- Hazardous Substances**
- COMAH Site
 - Explosive Site
 - NHHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
- Geological**
- BOS Recorded Mineral Site

Site Sensitivity Map - Segment A12



Order Details

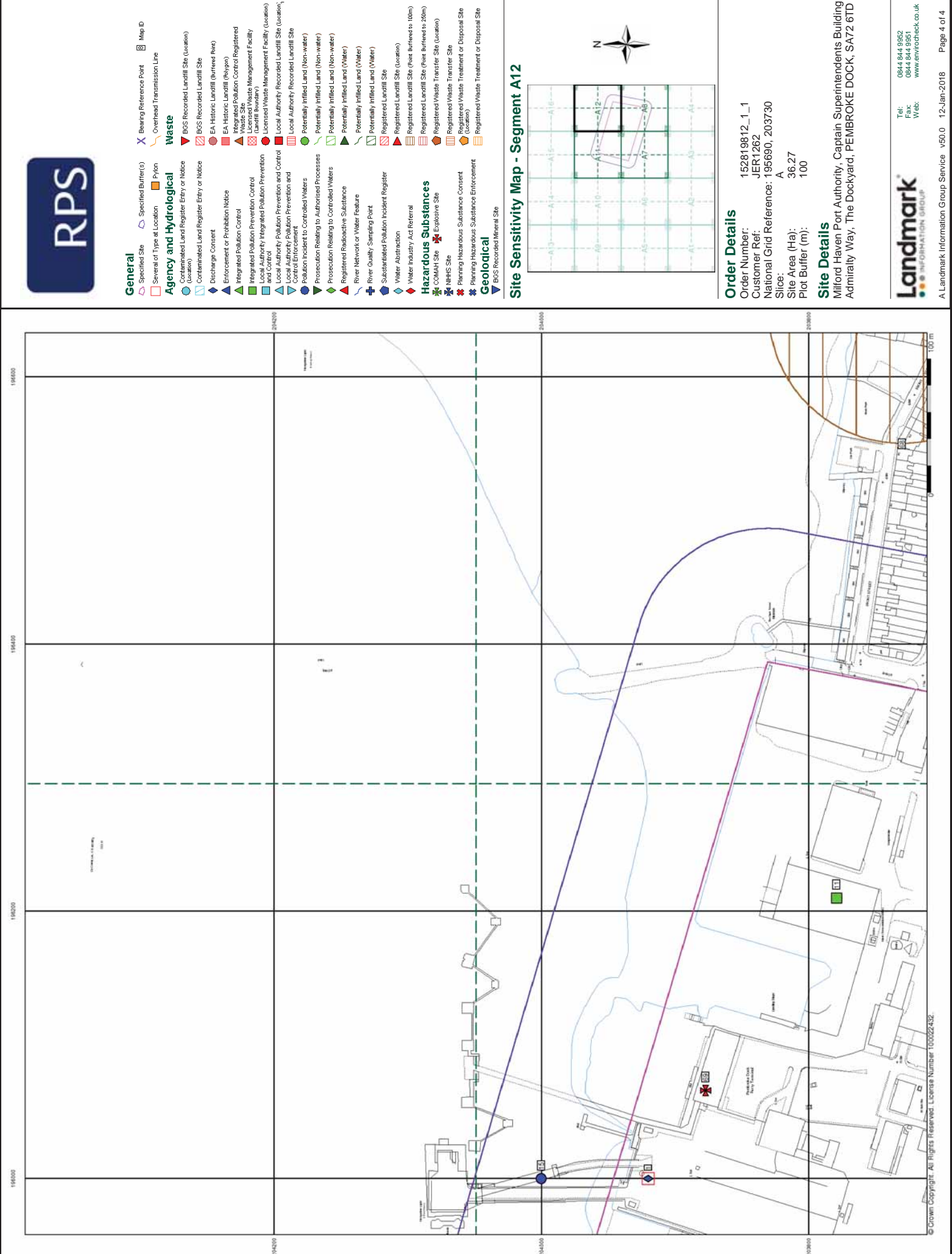
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 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Plot Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD

Landmark
 AN ENVIRONMENT GROUP

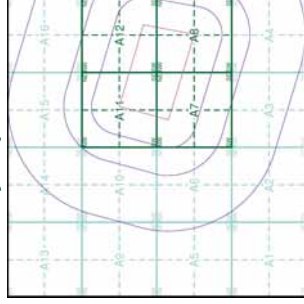
Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk





- General**
- Specified Site
 - Bearing Reference Point
 - Map ID
 - Several of Type at Location
- Waste**
- BOS Recorded Landfill Site (Location)
 - BOS Recorded Landfill Site
 - EA Historic Landfill (Buried Post)
 - EA Historic Landfill (Visible)
 - Integrated Pollution Control (Registered Waste Site)
 - Waste Management Facility (Landfill Receptor)
 - Licensed Waste Management Facility (Location)
 - Local Authority Recorded Landfill Site (Location)
 - Local Authority Recorded Landfill Site
 - Potentially Infiltrated Land (Non-water)
 - Potentially Infiltrated Land (Non-water)
 - Potentially Infiltrated Land (Water)
 - Potentially Infiltrated Land (Water)
 - Potentially Infiltrated Land (Water)
 - Registered Landfill Site
 - Registered Landfill Site (Location)
 - Registered Landfill Site (Point, Buried to 100m)
 - Registered Landfill Site (Point, Buried to 250m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site
 - Registered Waste Treatment or Disposal Site
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Local Authority Integrated Pollution Prevention Control
 - Local Authority Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control Enforcement
 - Pollution Incident to Controlled Waters
 - Prosecution Relating to Authorised Processes
 - Prosecution Relating to Controlled Waters
 - Registered Radioactive Substance
 - River Network or Water Feature
 - River Quality Sampling Point
 - Substantiated Pollution Incident Register
 - Water Abstraction
 - Water Industry Act Referral
- Hazardous Substances**
- COMAH Site
 - Explosive Site
 - NIRHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
 - BSS Recorded Mineral Site

Site Sensitivity Map - Slice A



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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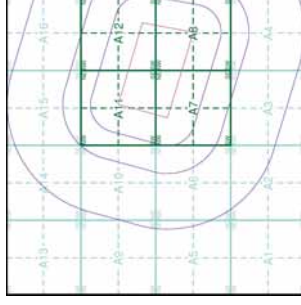
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Industrial Land Use Map

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Site
 - Map ID
- Industrial Land Use**
- Contemporary Trade Directory Entry
 - Fuel Station Entry
 - Gas Pipeline
 - Points of Interest - Commercial Services
 - Points of Interest - Education and Health
 - Points of Interest - Manufacturing and Production
 - Points of Interest - Public Infrastructure
 - Points of Interest - Recreational and Environmental
 - Underground Electrical Cables

Industrial Land Use Map - Slice A



Order Details

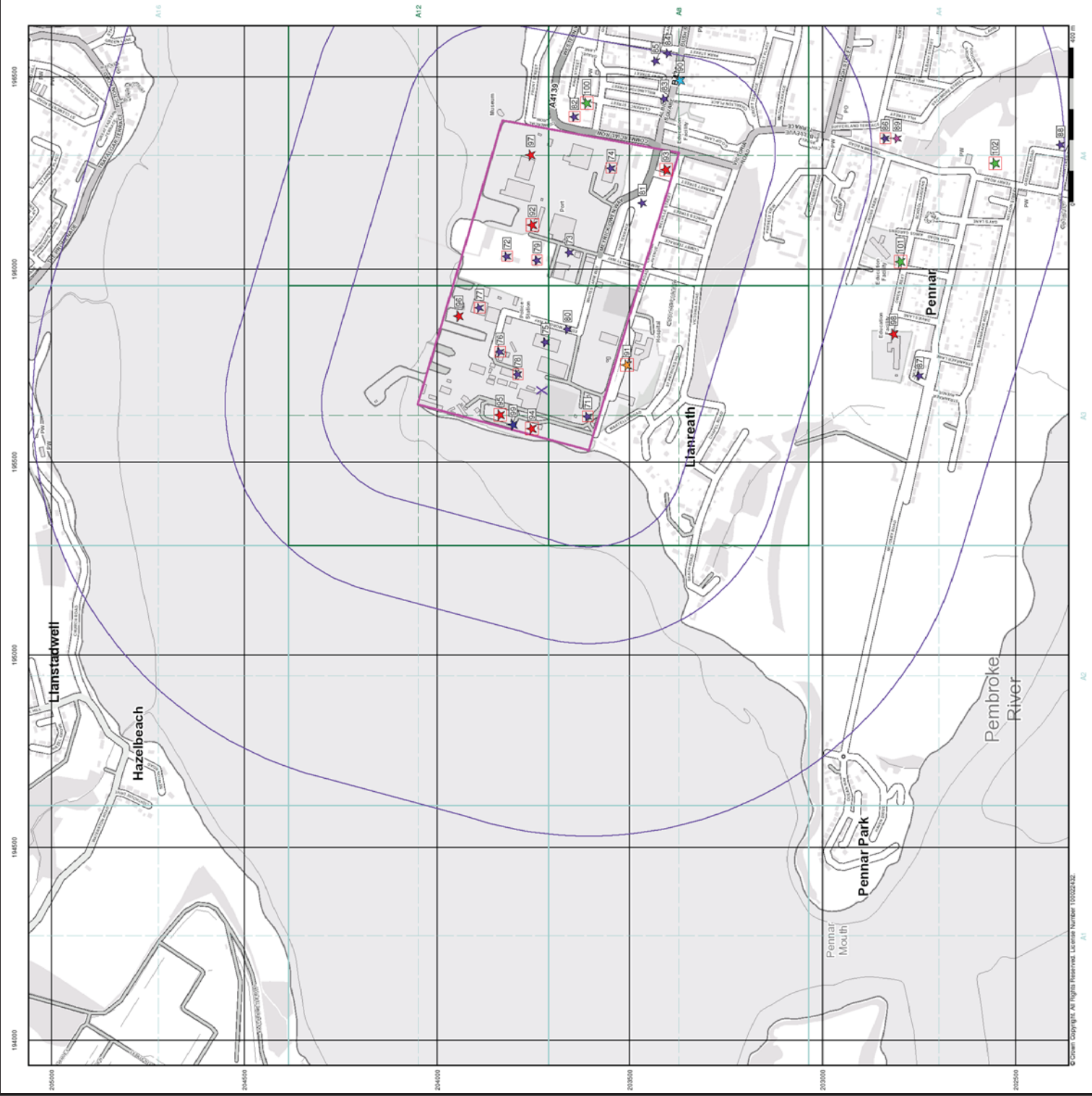
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 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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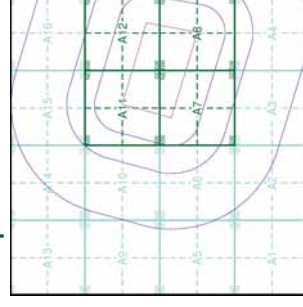
- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence



Flood Map - Slice A



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



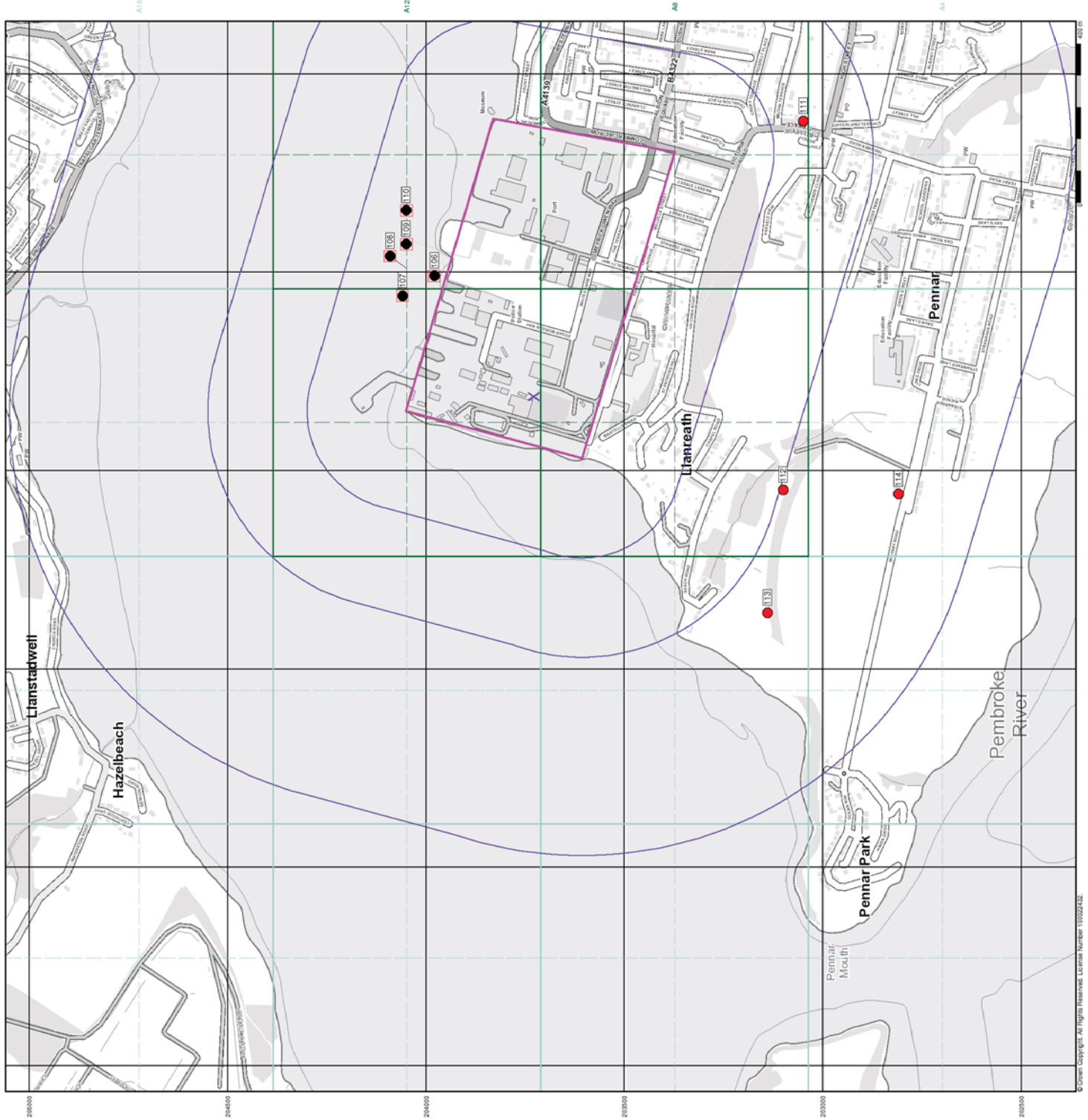
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- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
 - Several of Type at Location

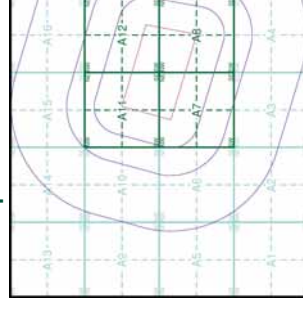
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other



For Borehole information please refer to the Borehole .csv file which accompanied this slice.
 A copy of the BGS Borehole Ordering Form is available to download from the Support section at www.envirocheck.co.uk.

Borehole Map - Slice A



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

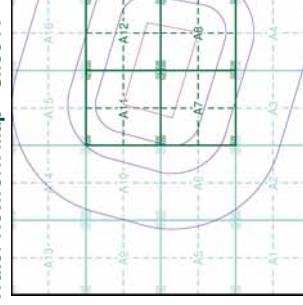
OS Water Network Data

- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in meters)

- Standard Contour
- Master Contour
- Spot Height
- Mean Low Water
- Mean High Water

OS Water Network Map - Slice A



Order Details

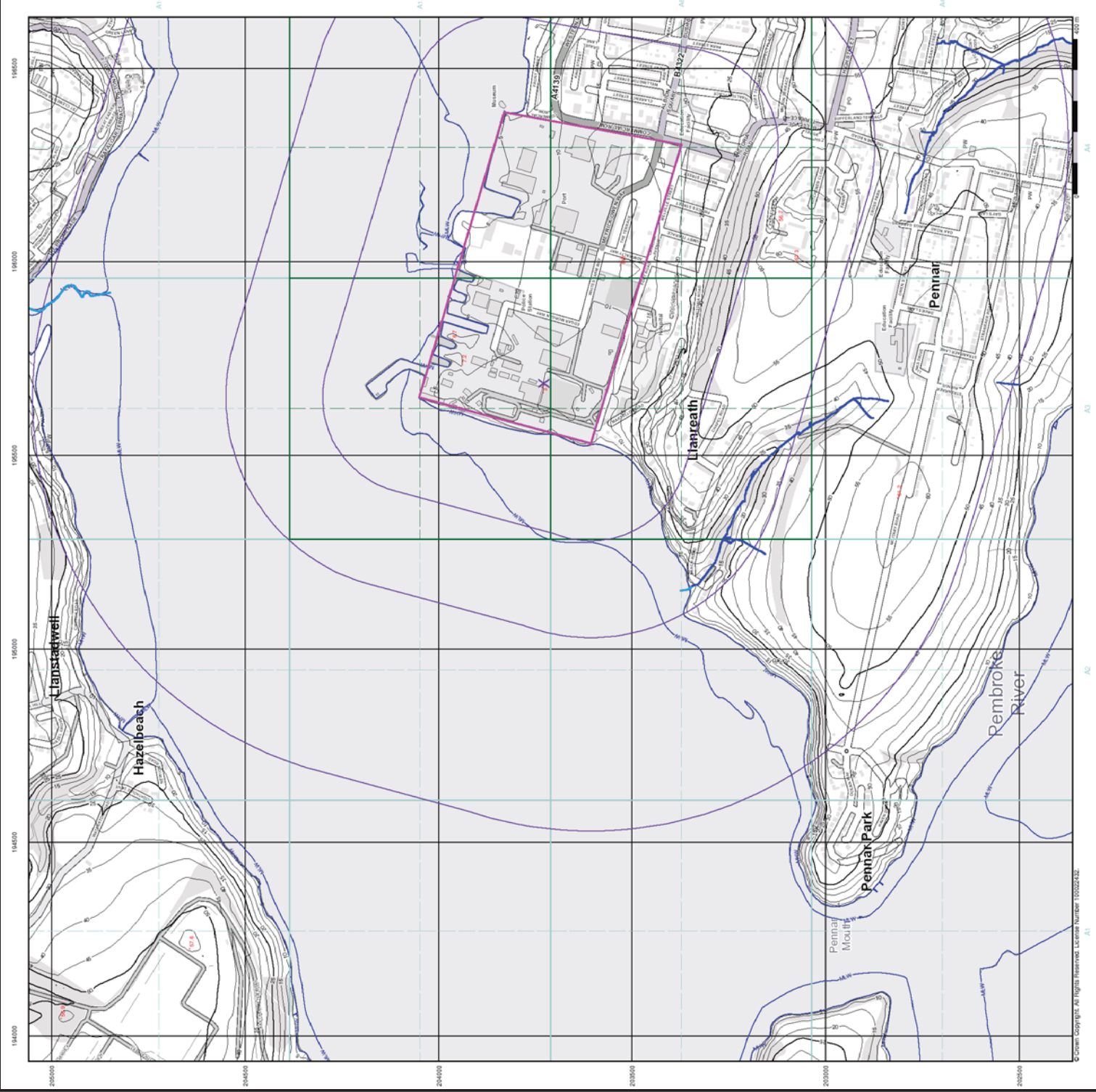
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 Search Buffer (m): 1000

Site Details

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- General**
- Specified Site
 - Specified Buffer(s)
 - X Bearing Reference Point

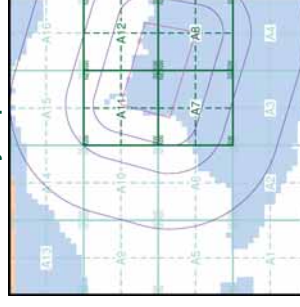
Risk of Flooding from Surface Water

- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

- See the suitability map below
- National to county
 - County to town
 - Town to street
 - Street to parcels of land
 - Property

EANRW Suitability Map - Slice A



Order Details

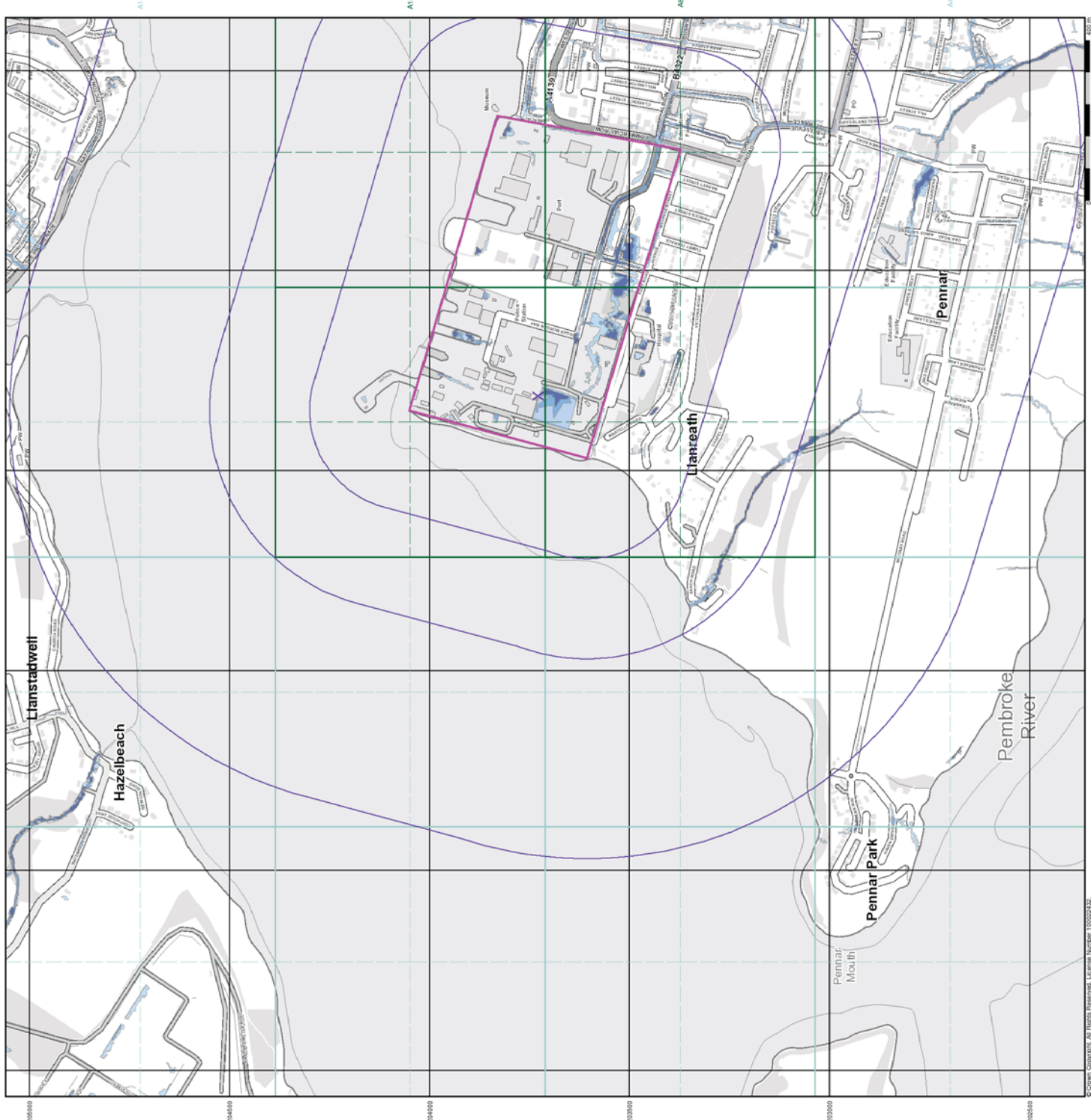
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 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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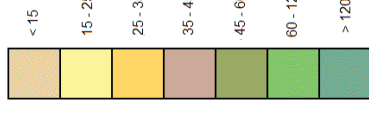


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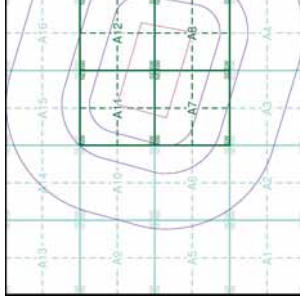
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice A



Order Details

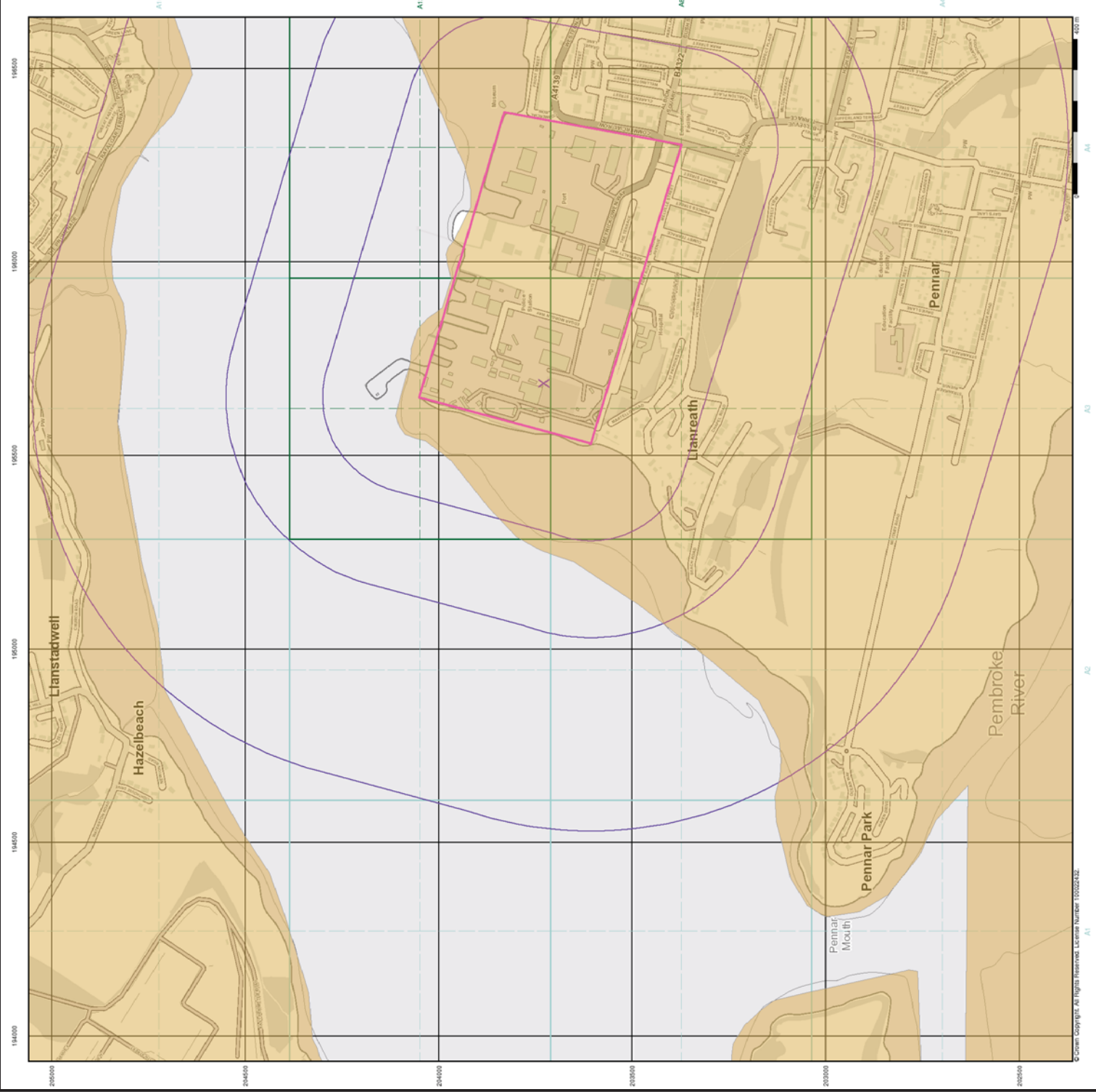
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 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
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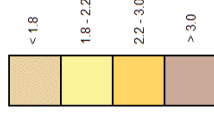


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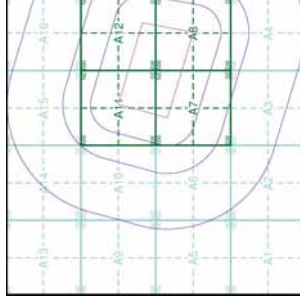
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- Specified Buffer(s)
- X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A



Order Details

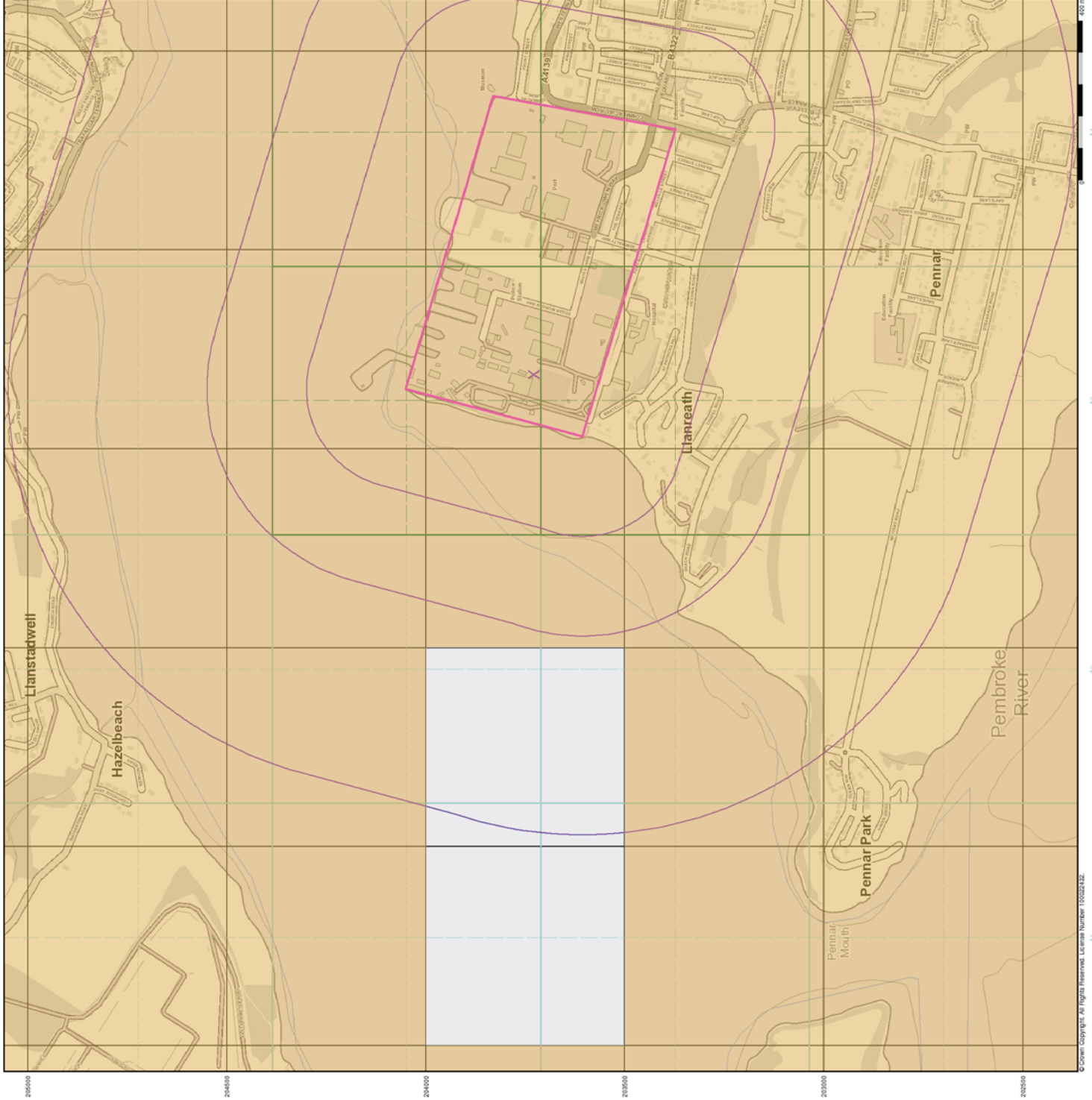
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 Site: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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General

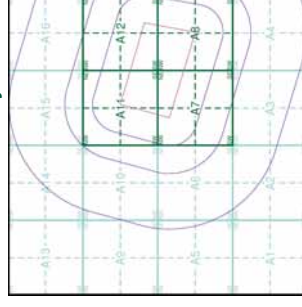
- Specified Site
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- Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice A



Order Details

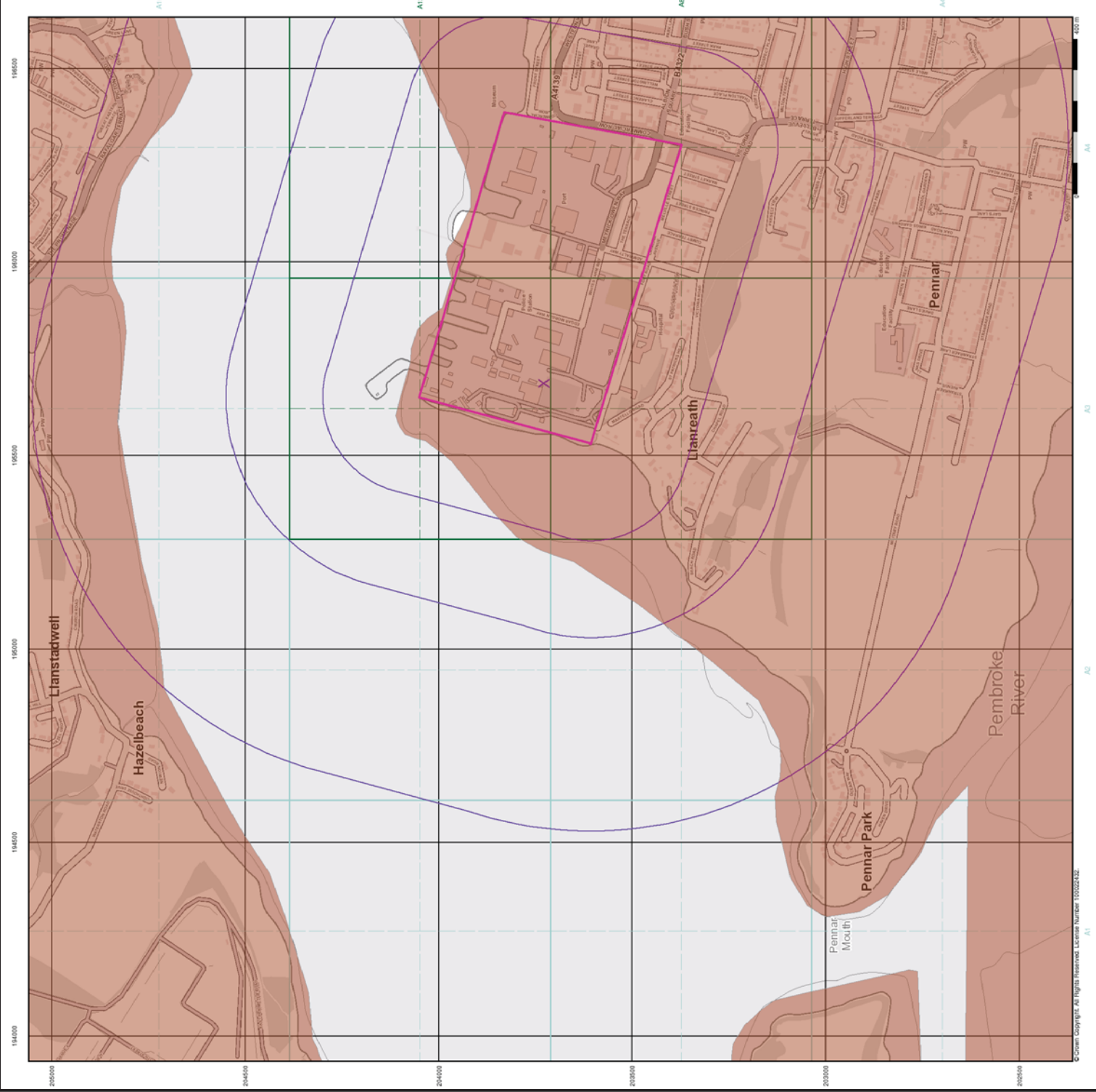
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 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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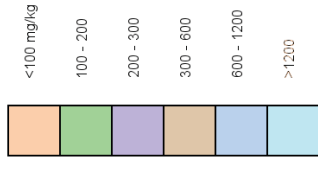


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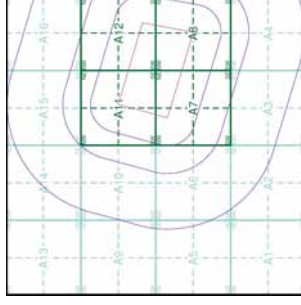
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A



Order Details

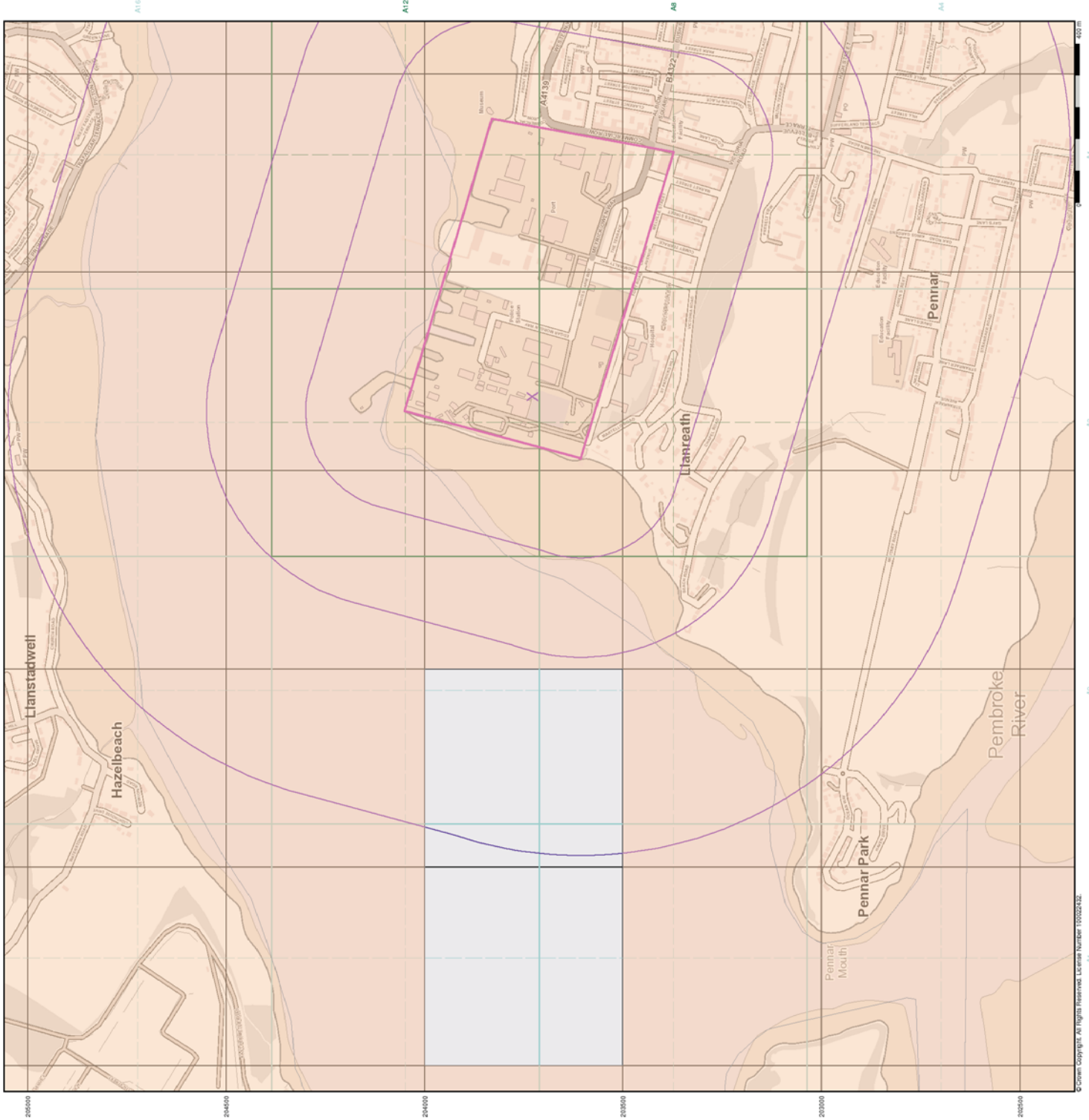
Order Details: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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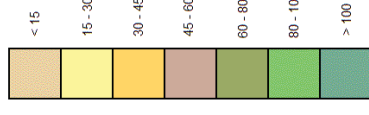


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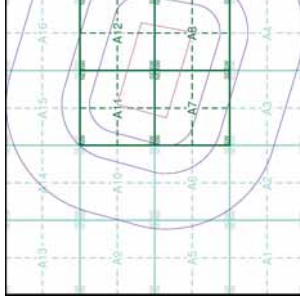
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A



Order Details

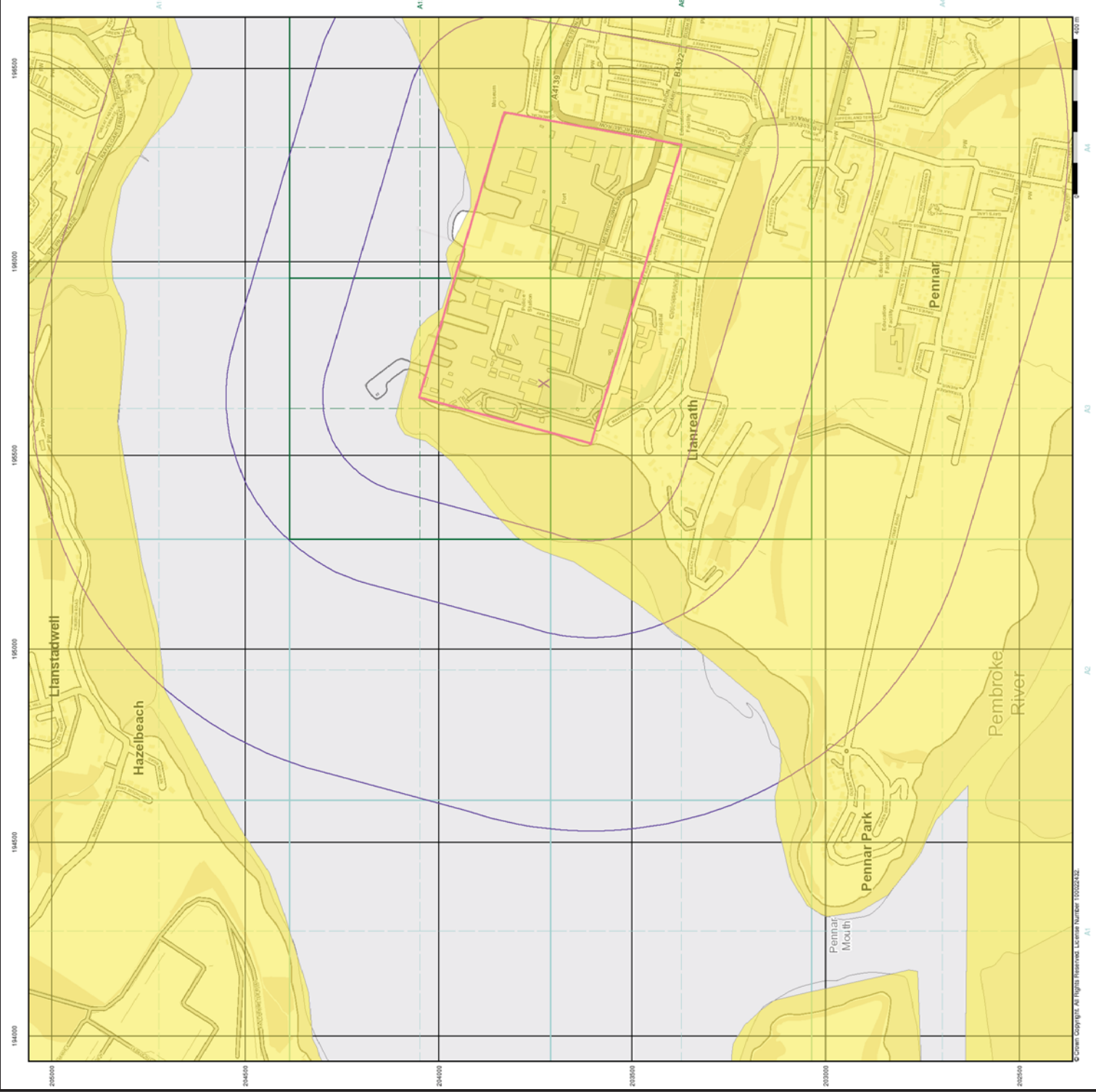
Order Details: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Site: A
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Pembroke Published 1864

Source map scale - 1:500

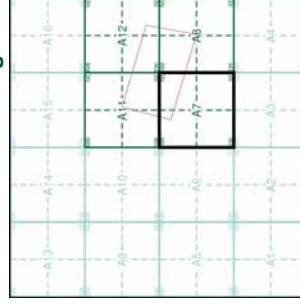
The 1:500 scale Ordnance Survey mapping was introduced in 1865 as a replacement for the 1:2500 scale that had been in use since 1825. By 1895, the 1:500 scale mapping of about 4000 at the time of survey, although many towns were mapped more than once at this scale, and none have been since 1910. The 1:500 scale gives particular emphasis to such features as lamp posts, man holes, arched passages and minor building projections. Also often featured are divisions between tenements, interior ground floor layouts of public buildings, and on earlier plans, the functions of the various parts of larger industrial premises are also indicated. Content of the plans does vary however, from one town to the next in terms of, for example, the completeness of railway tracks and the coverage of public buildings.

Please note: Due to the partial coverage of Historical Town Plans, it is possible that not all segments within an order will contain mapping. Only the segments that have Town Plan coverage will be generated.

Map Name(s) and Date(s)

039_08_008
1864
1:500
039_08_006
1867
1:500
039_08_017
1864
1:500

Historical Town Plan - Segment A7



Order Details

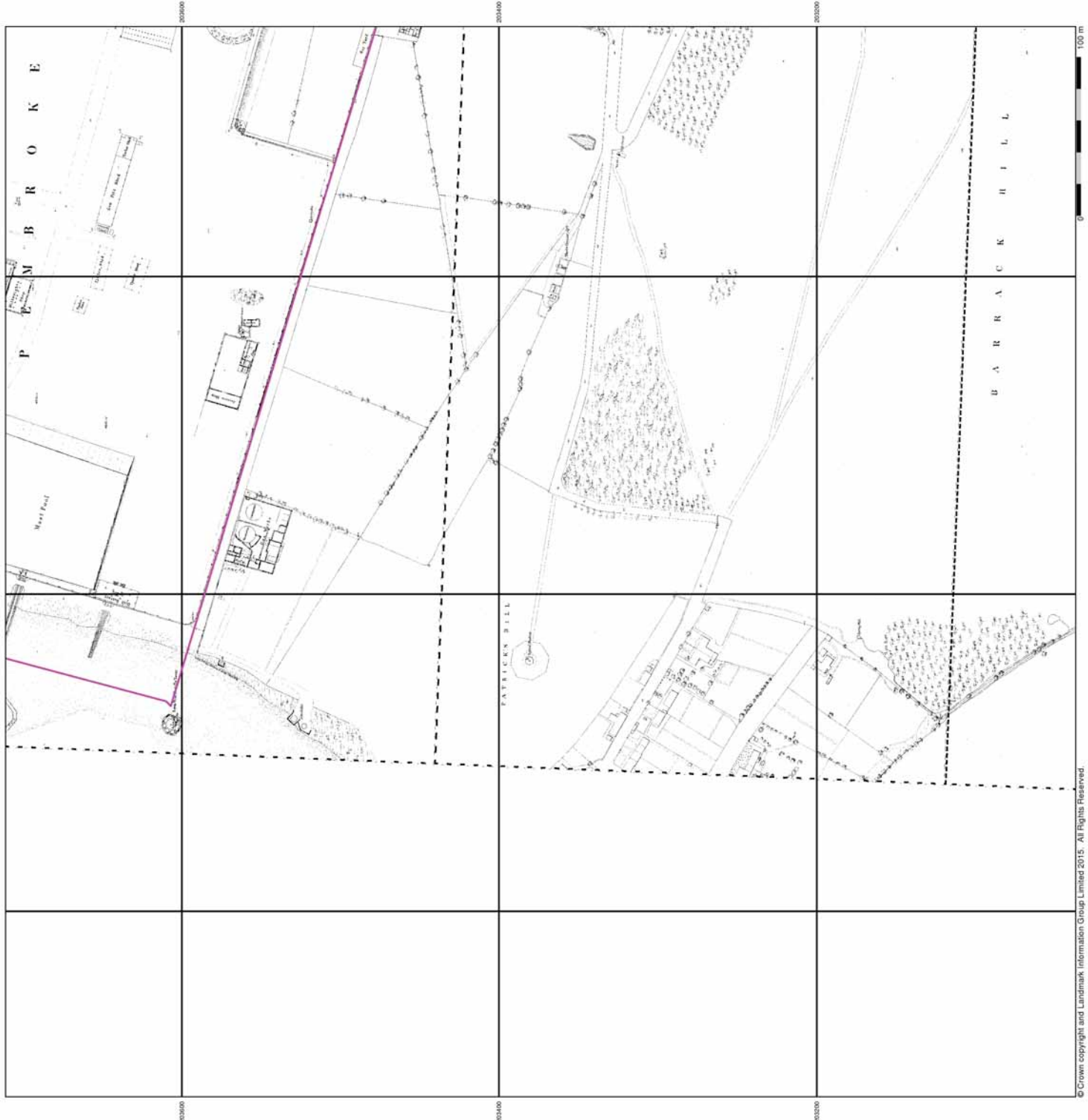
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Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 0

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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**Pembrokeshire
Published 1864**

Source map scale - 1:500

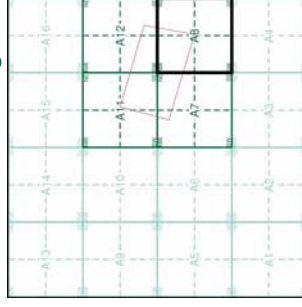
The 1:500 scale Ordnance Survey mapping was introduced in 1855 as a replacement for the 1:2500 scale. The 1:2500 scale that had been in use since 1825. By 1865, the 1:500 scale mapping of towns was mapped more than once at this scale and note have been since 1910. The 1:500 scale gives particular emphasis to such features as lamp posts, man holes, arched passages and minor building projections. Also often featured are divisions between tenements, interior ground floor layouts of public buildings and on earlier plans, the functions of the various parts of larger industrial premises are also indicated. Content of the plans does vary however, from one town to the next in terms of, for example, the completeness of railway tracks and the coverage of public buildings.

Please note: Due to the partial coverage of Historical Town Plans, it is possible that not all segments within an order will contain mapping. Only the segments that have Town Plan coverage will be generated.

Map Name(s) and Date(s)

039_08_003	039_08_004	039_08_005
1864	1864	1864
1:500	1:500	1:500
039_08_008	039_08_009	039_08_010
1864	1864	1864
1:500	1:500	1:500
039_08_013	039_08_014	039_08_015
1864	1864	1864
1:500	1:500	1:500

Historical Town Plan - Segment A8



Order Details

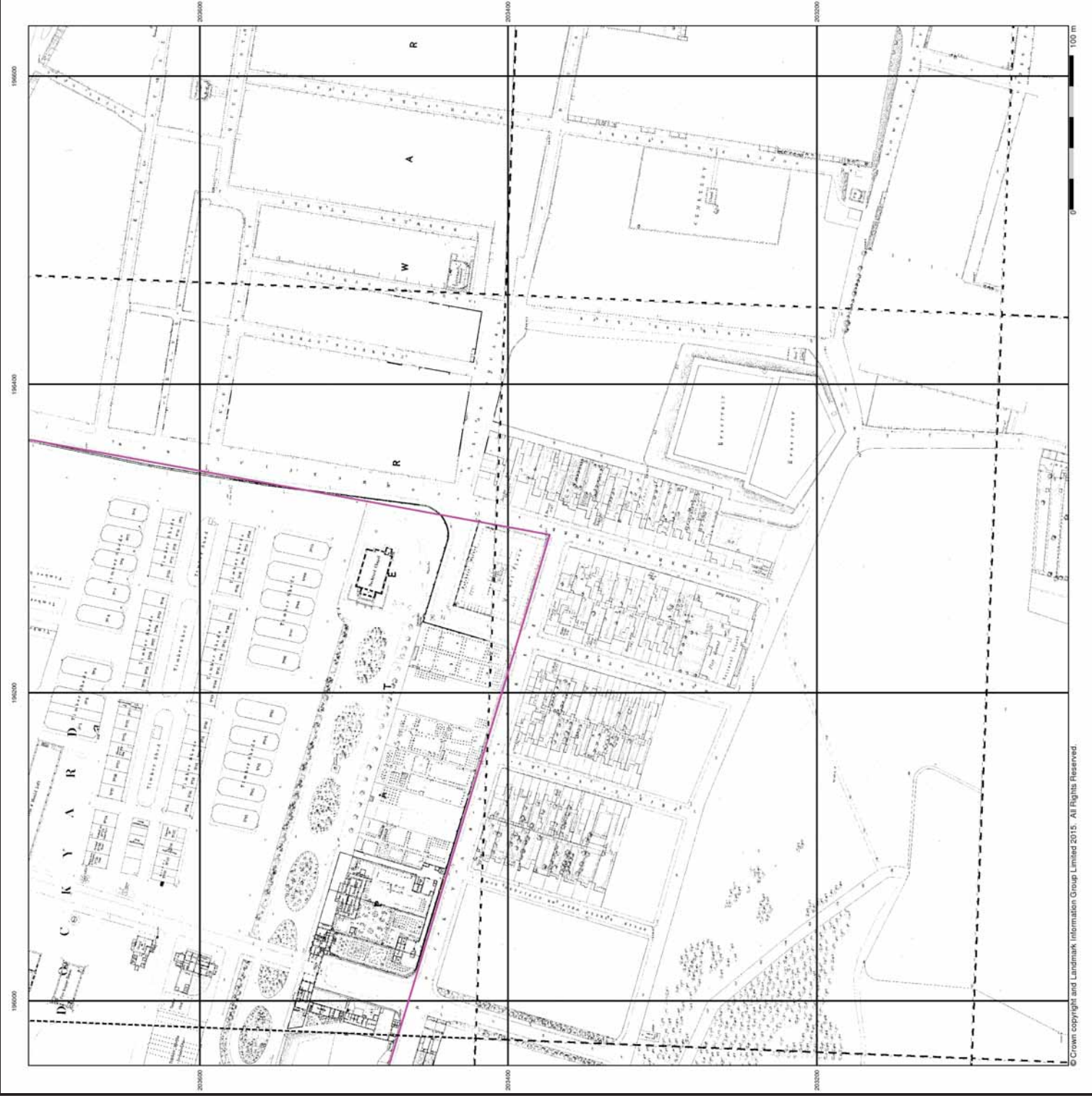
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 0

Site Details

Millford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Fax: 0844 844 9951
Web: www.envirocheck.co.uk





Pembrokeshire Published 1864

Source map scale - 1:500

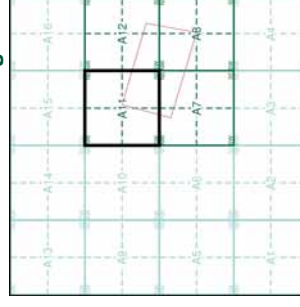
The 1:500 scale Ordnance Survey mapping was introduced in 1855 as a replacement for the 1:2500 scale. The 1:2500 scale that had been in operation since 1825. By 1895, the 1:500 scale mapping of towns was mapped more than once at this scale, and note have been since 1910. The 1:500 scale gives particular emphasis to such features as lamp posts, man holes, arched passages and minor building projections. Also often featured are divisions between tenements, interior ground floor layouts of public buildings, and on earlier plans, the functions of the various parts of larger industrial premises are also indicated. Content of the plans does vary however, from one town to the next in terms of, for example, the completeness of railway tracks and the coverage of public buildings.

Please note: Due to the partial coverage of Historical Town Plans, it is possible that not all segments within an order will contain mapping. Only the segments that have Town Plan coverage will be generated.

Map Name(s) and Date(s)

039_01_023	1864	1:500
039_08_008	1864	1:500

Historical Town Plan - Segment A11



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 0

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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 Web: www.envirocheck.co.uk



Pembrookshire Published 1864

Source map scale - 1:500

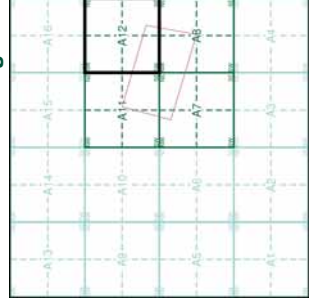
The 1:500 scale Ordnance Survey mapping was introduced in 1855 as a replacement for the 1:2500 scale that had been in use since 1825. By the time of its implementation in 1855, the 1:500 scale maps were more detailed than those of about 1800 at the time of survey, although fewer towns were mapped more than once at this scale, and none have been since 1910. The 1:500 scale gives particular emphasis to such features as lamp posts, man holes, arched passages and minor building projections. Also often featured are divisions between tenements, interior ground floor layouts of public buildings, and on earlier plans, the functions of the various parts of larger industrial premises are also indicated. Content of the plans does vary however, from one town to the next in terms of, for example, the completeness of railway tracks and the coverage of public buildings.

Please note: Due to the partial coverage of Historical Town Plans, it is possible that not all segments within an order will contain mapping. Only the segments that have Town Plan coverage will be generated.

Map Name(s) and Date(s)

1039_04_020	1864	1:500
1039_04_023	1864	1:500
1039_04_024	1864	1:500
1039_04_025	1864	1:500
1039_06_003	1864	1:500
1039_06_004	1864	1:500
1039_08_005	1864	1:500

Historical Town Plan - Segment A12



Order Details

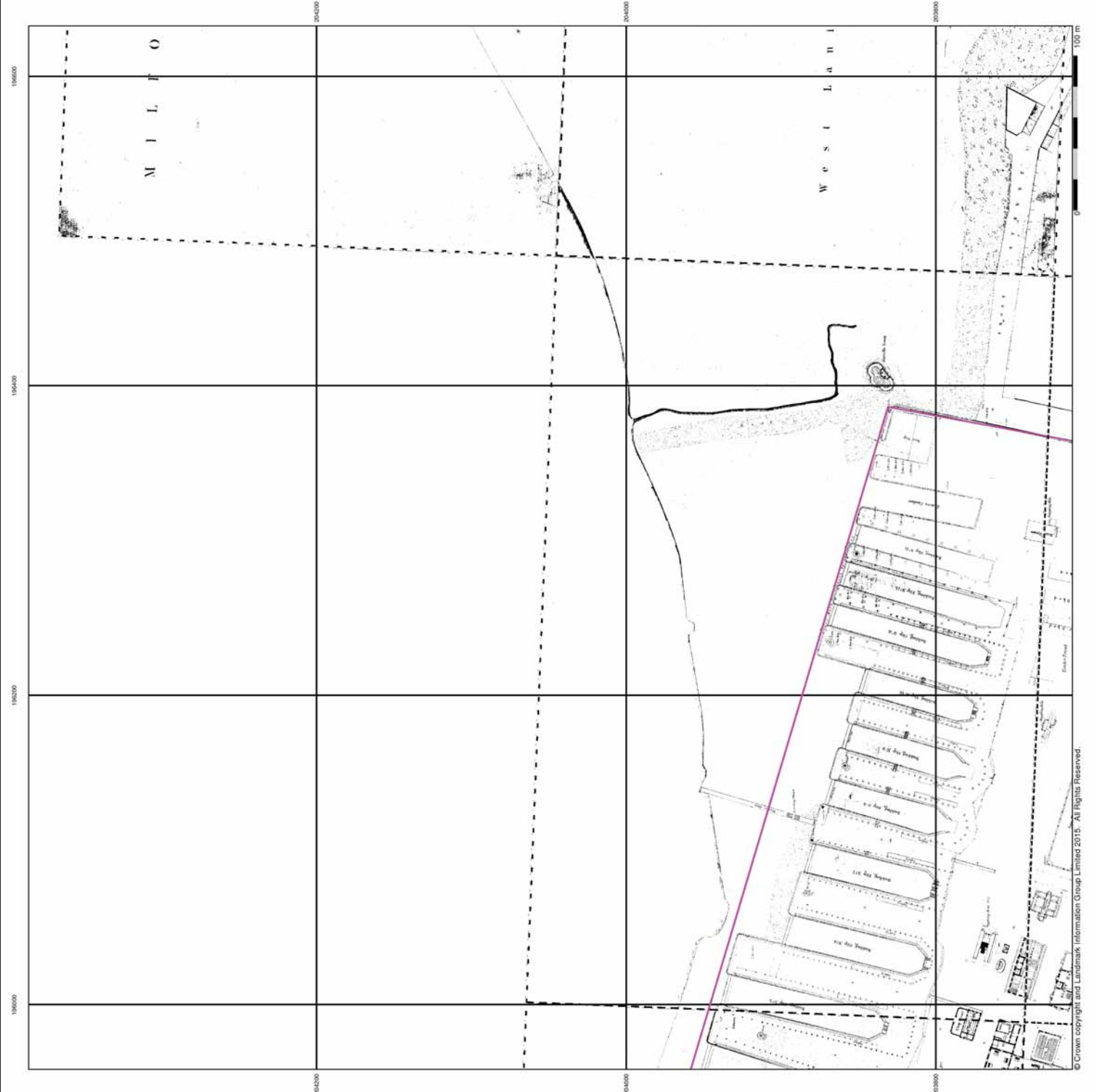
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 0

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250

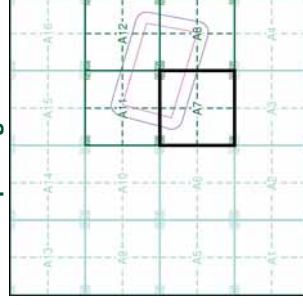
Large-Scale National Grid Data 1:2,500 and 1:1,250



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Pembrokeshire	1:2,500	1866	2
Pembrokeshire	1:2,500	1908	3
Ordnance Survey Plan	1:2,500	1967	4
Additional SIMs	1:2,500	1967	5
Ordnance Survey Plan	1:1,250	1989	6
Large-Scale National Grid Data	1:1,250	1994	7
Large-Scale National Grid Data	1:1,250	1995	8
Large-Scale National Grid Data	1:1,250	1996	9
Historical Aerial Photography	1:2,500	2003	10

Historical Map - Segment A7



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Site: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



Tel: 0844 844 9852
 Fax: 0844 844 9851
 Web: www.envirocheck.co.uk

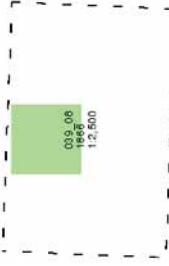


Pembrokeshire Published 1866

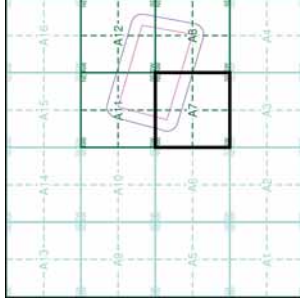
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey, Warley, Birmingham, England, and Scotland in the 1940s. The maps were digitised at a scale of 1:2,500. The maps were published in the 1860s and 1870s. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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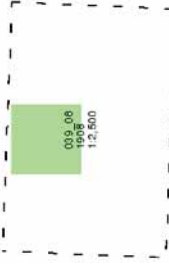


Pembrokeshire Published 1908

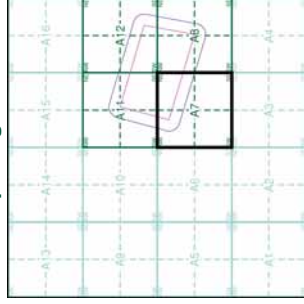
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey, Warley, Birmingham, and the National Library of Scotland in the 1940s. The original maps were published in 1908. The maps were reproduced at a scale of 1:2,500. The maps were published in 1908. The maps were published in 1908. The maps were published in 1908.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

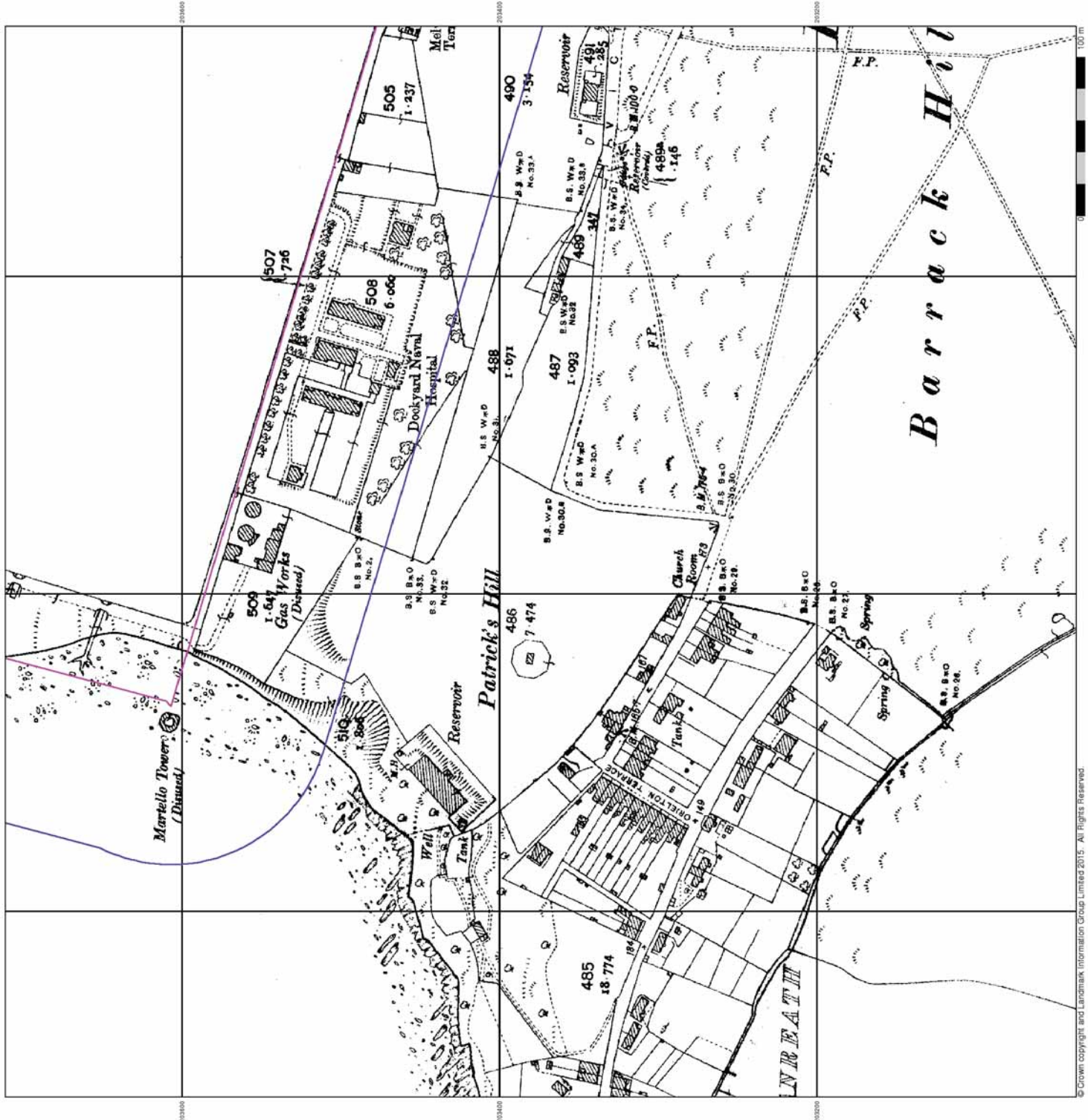
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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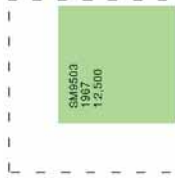


Ordnance Survey Plan Published 1967

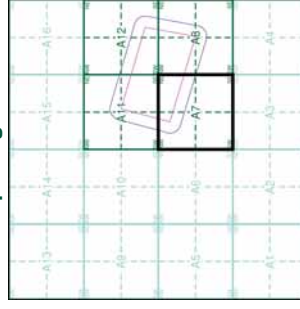
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at a 1:2,500 scale for England, Wales and Scotland in the 1940s. In 1864, the Ordnance Survey was established, and its maps were considered to be the authoritative parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

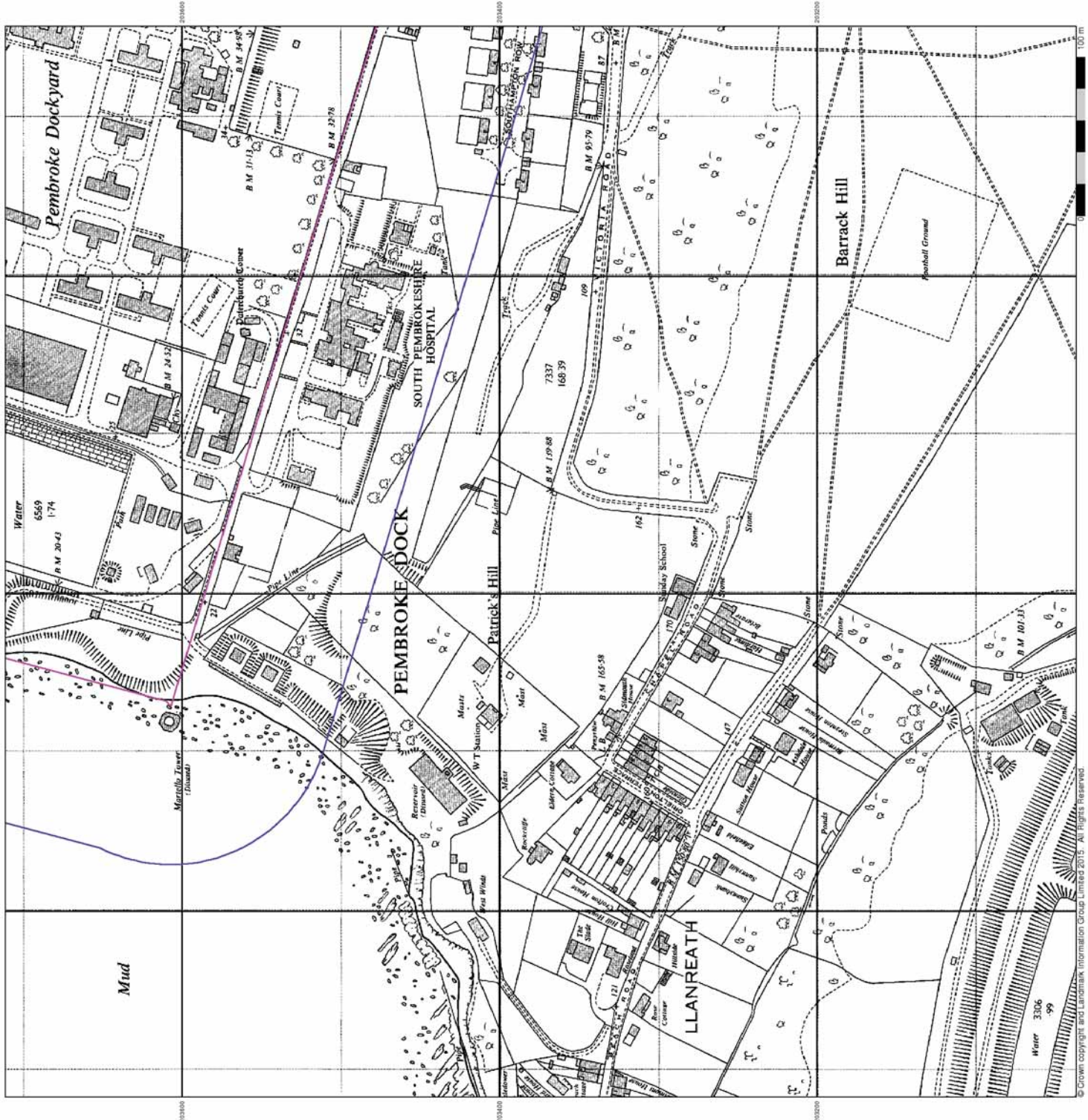
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Millford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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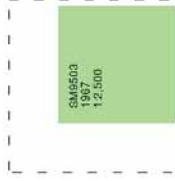


Additional SIMS Published 1967

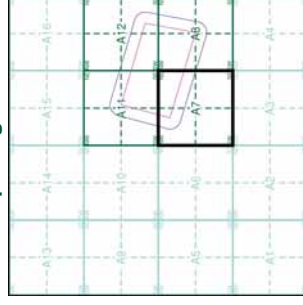
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are their prior editions or mapping which were produced and published from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

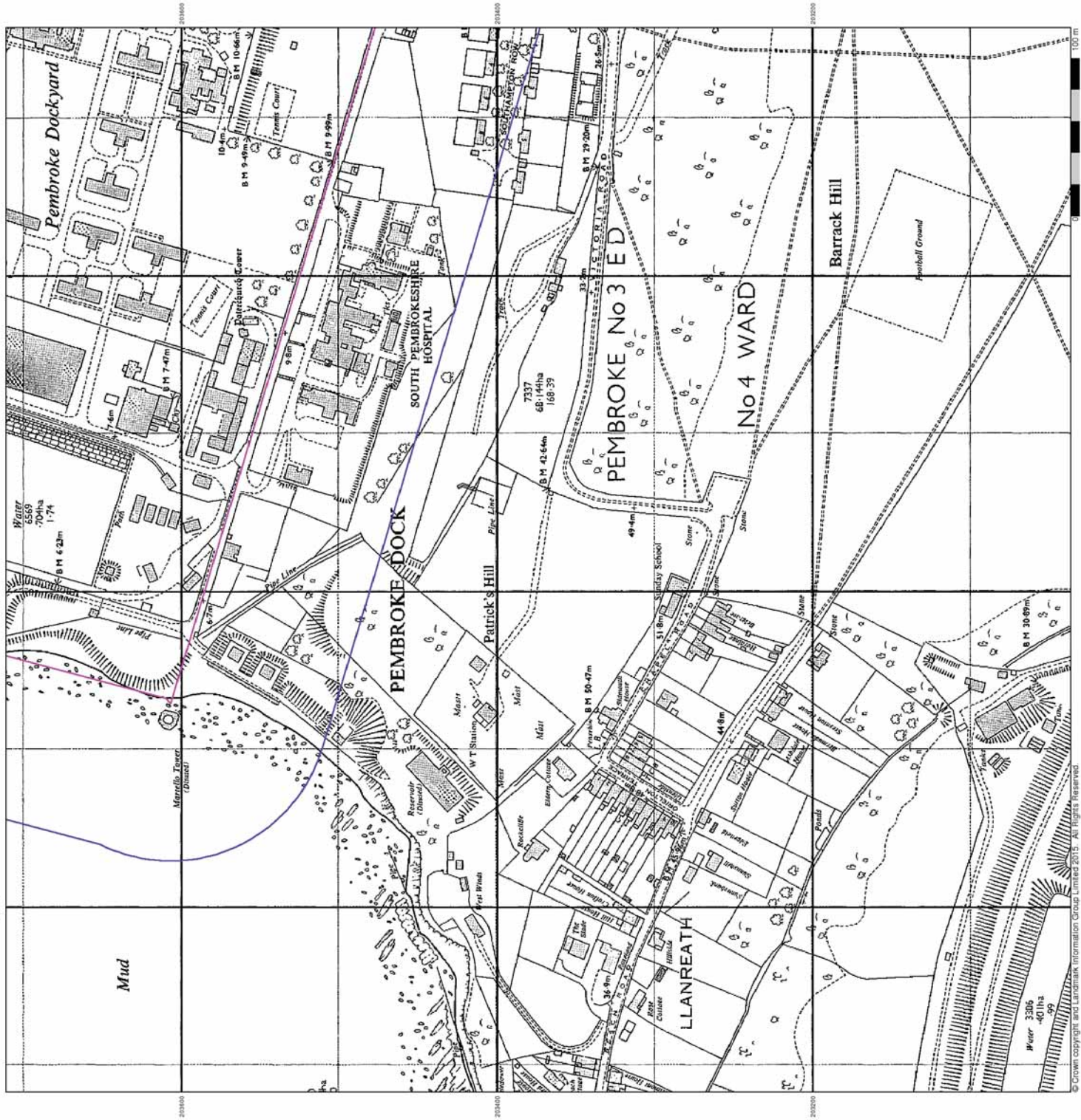
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Site: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Ordnance Survey Plan Published 1989

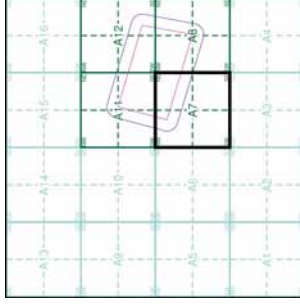
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held in the archives of the Ordnance Survey in the United Kingdom. The maps were adapted for England, Wales and Scotland in the 1940s and 1950s. The maps covered the whole of what was then considered to be the United Kingdom of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938 all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SM95030NE	1989	1:1,250
SM95030SE	1989	1:1,250
SM95030SW	1989	1:1,250
SM95030E	1989	1:1,250

Historical Map - Segment A7



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Large-Scale National Grid Data Published 1994

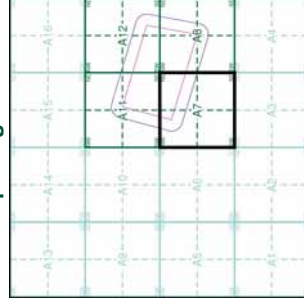
Source map scale - 1:1,250

Large Scale National Grid Data superseded SIM cards (Ordnance Survey's Simulation on Microfilm) in 1992, and continued to be produced until 1999. These maps are produced from aerial photography and provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SMS5003NW	SMS5003NE
1994	1994
1:1,250	1:1,250
SMS5003SW	SMS5003SE
1994	1994
1:1,250	1:1,250

Historical Map - Segment A7



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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 Fax: 0844 844 9951
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Large-Scale National Grid Data Published 1995

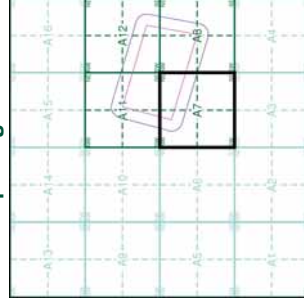
Source map scale - 1:1,250

Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's Survey Information on Microfilm) in 1992, and continued to be produced until 1999. These maps are derived from aerial photography and provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SM6003NE	1995
SM6003SE	1995

Historical Map - Segment A7



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



Tel: 0844 844 9952
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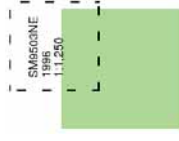
Large-Scale National Grid Data

Published 1996

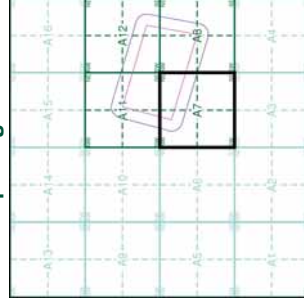
Source map scale - 1:1,250

Large Scale National Grid Data superseded SIM cards (Ordnance Survey's Simulation on Microfilm) in 1992, and continued to be produced until 1999. These maps are derived from aerial photography and provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



Tel: 0844 844 9952
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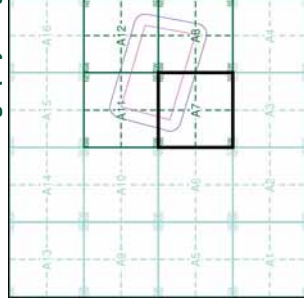


Historical Aerial Photography Published 2003

This aerial photography was produced by Geomapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain



Historical Aerial Photography - Segment A7



Order Details

Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500

Large-Scale National Grid Data 1:2,500 and 1:1,250

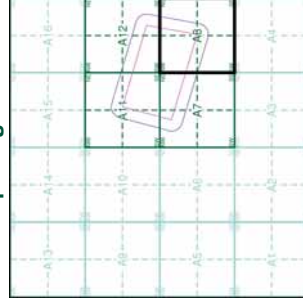
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Pembrokeshire	1:2,500	1866	2
Pembrokeshire	1:2,500	1908	3
Ordnance Survey Plan	1:2,500	1967 - 1968	4
Additional SIMs	1:2,500	1967	5
Ordnance Survey Plan	1:2,500	1974	6
Ordnance Survey Plan	1:1,250	1969	7
Additional SIMs	1:1,250	1990	8
Large-Scale National Grid Data	1:1,250	1994	9
Large-Scale National Grid Data	1:1,250	1994 - 1995	10
Large-Scale National Grid Data	1:1,250	1996	11
Large-Scale National Grid Data	1:1,250	1996	12
Historical Aerial Photography	1:2,500	2003	13

Historical Map - Segment A8



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Site: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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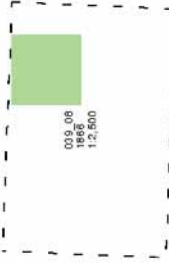


Pembrokeshire Published 1866

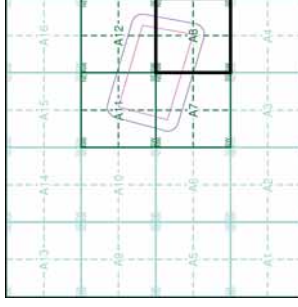
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey archives in England, Wales and Scotland in the 1940s. The maps were digitised and published by RPS in 2015. The maps cover the whole of what was considered to be the delineated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938 all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

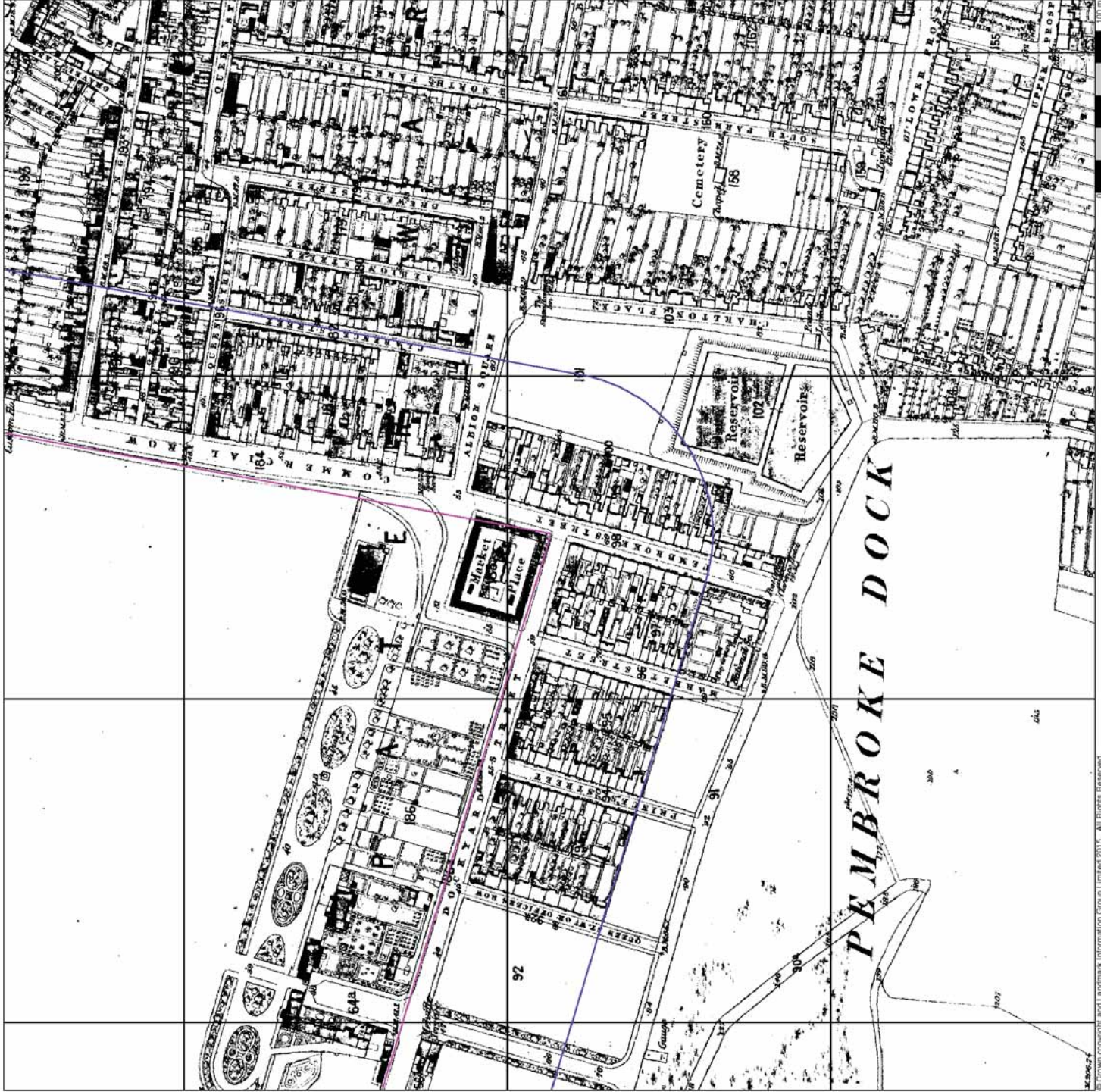
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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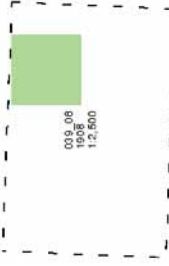


Pembrokeshire Published 1908

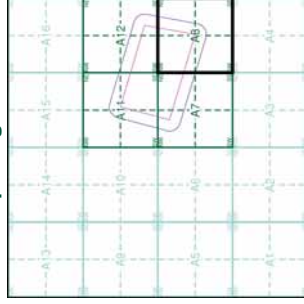
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held in the archives of the Ordnance Survey, which were adopted for England, Wales and Scotland in the 1940s. The first map of Pembrokeshire was published in 1854, and the maps were updated to the 1908 edition. The maps were compiled from the work of what were considered to be the best cartographers of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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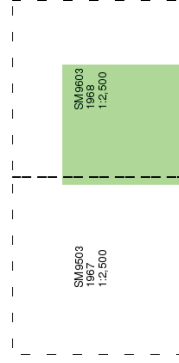
Ordnance Survey Plan

Published 1967 - 1968

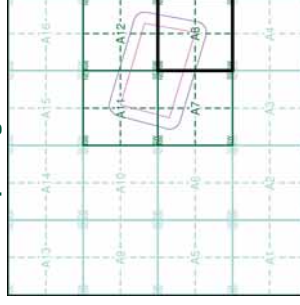
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at a 1:2,500 scale for England, Wales and Scotland in the 1940s, 1954 and 1968. The maps were scanned and reprojected to the OS datum and covered the whole of what was considered to be the delineated parts of Great Britain. The published date given below is often many years later than the surveyed date. Before 1938 all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SATZ 6TD



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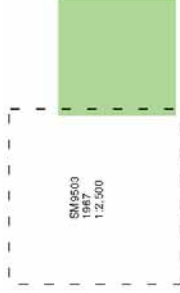


Additional SIMs Published 1967

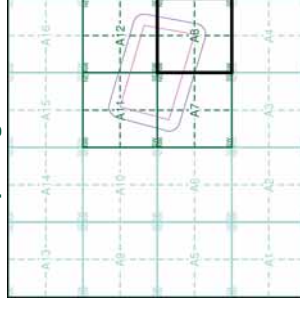
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are their prior editions mapping which were produced and published in 1947 to 1967. The maps contain information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

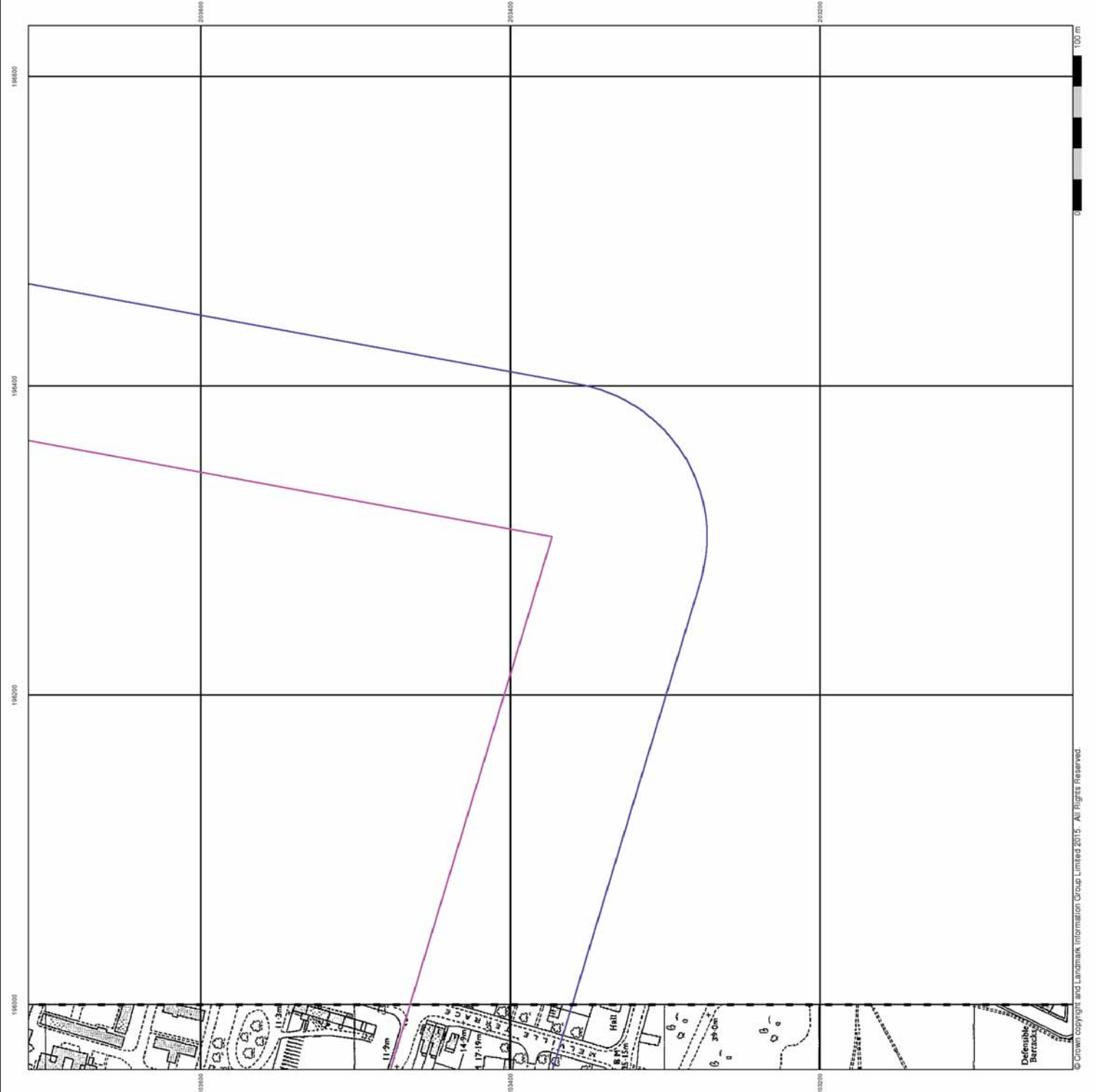
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Ordnance Survey Plan Published 1974

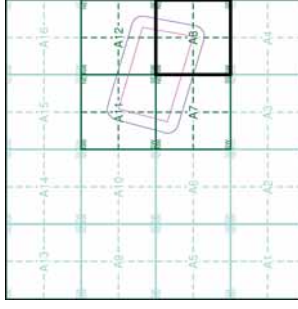
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at a scale adopted for England, Wales and Scotland in the 1840s. In 1854 at a scale of 1:2,500. The maps were surveyed between 1840 and 1866. It covered the whole of what was considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938 all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

Order Number: 152819812_1_1
Customer Ref: JERI262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Ordnance Survey Plan Published 1989

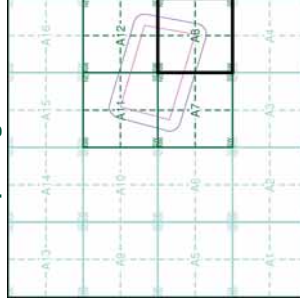
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at a 1:2,500 scale for England, Wales and Scotland in the 1940s, 1954 and 1964. The maps were then re-photographed at a scale of 1:1,250. The whole of what was considered to be the populated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938 all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SM9603NE 1989 1:1,250	SM9603NW 1989 1:1,250	SM9603NE 1989 1:1,250
SM9603SE 1989 1:1,250	SM9603SW 1989 1:1,250	SM9603SE 1989 1:1,250

Historical Map - Segment A8



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Additional SIMs Published 1990

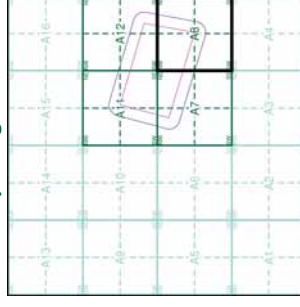
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are either minor editions or mappings which were produced at publication for buildings, roads and land-use. The maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SMR63030NE
1990
1:1,250

Historical Map - Segment A8



Order Details

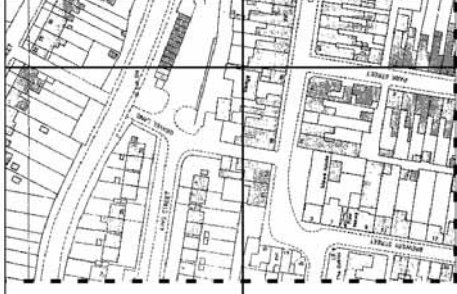
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

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Large-Scale National Grid Data

Published 1994

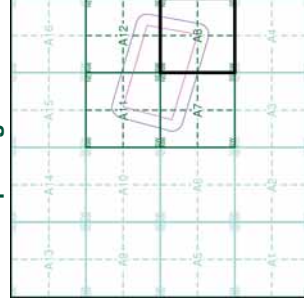
Source map scale - 1:1,250

Large Scale National Grid Data superseded SIM cards (Ordnance Survey's Survey Information on Microfilm) in 1992, and continued to be produced until 1999. These maps are the original digital mapping data and provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SM9603NE	1994	1:1,250	SM9603NW	1994	1:1,250
SM9603SE	1994	1:1,250	SM9603SW	1994	1:1,250

Historical Map - Segment A8



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

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**Large-Scale National Grid Data
Published 1994 - 1995**

Source map scale - 1:1,250

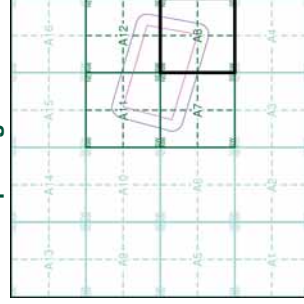
Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's Simulation on Microfilm) in 1992, and continued to be produced until 1999. The maps were produced at a scale of 1:1,250 and provide detailed information on buildings and roads, but tend to miss topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SM96030NE	SM96030NW	SM96030NE
1995	1994	1994
1:1,250	1:1,250	1:1,250

SM96030SE
1995
1:1,250

Historical Map - Segment A8



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

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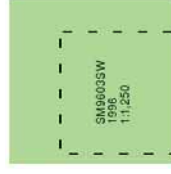


Large-Scale National Grid Data Published 1996

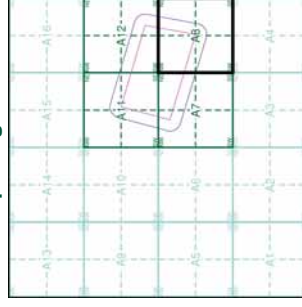
Source map scale - 1:1,250

Large Scale National Grid Data superseded SIM cards (Ordnance Survey's information on microfilm) in 1992, and continued to be produced until 1999. These maps were originally published at a scale of 1:1,250 and provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

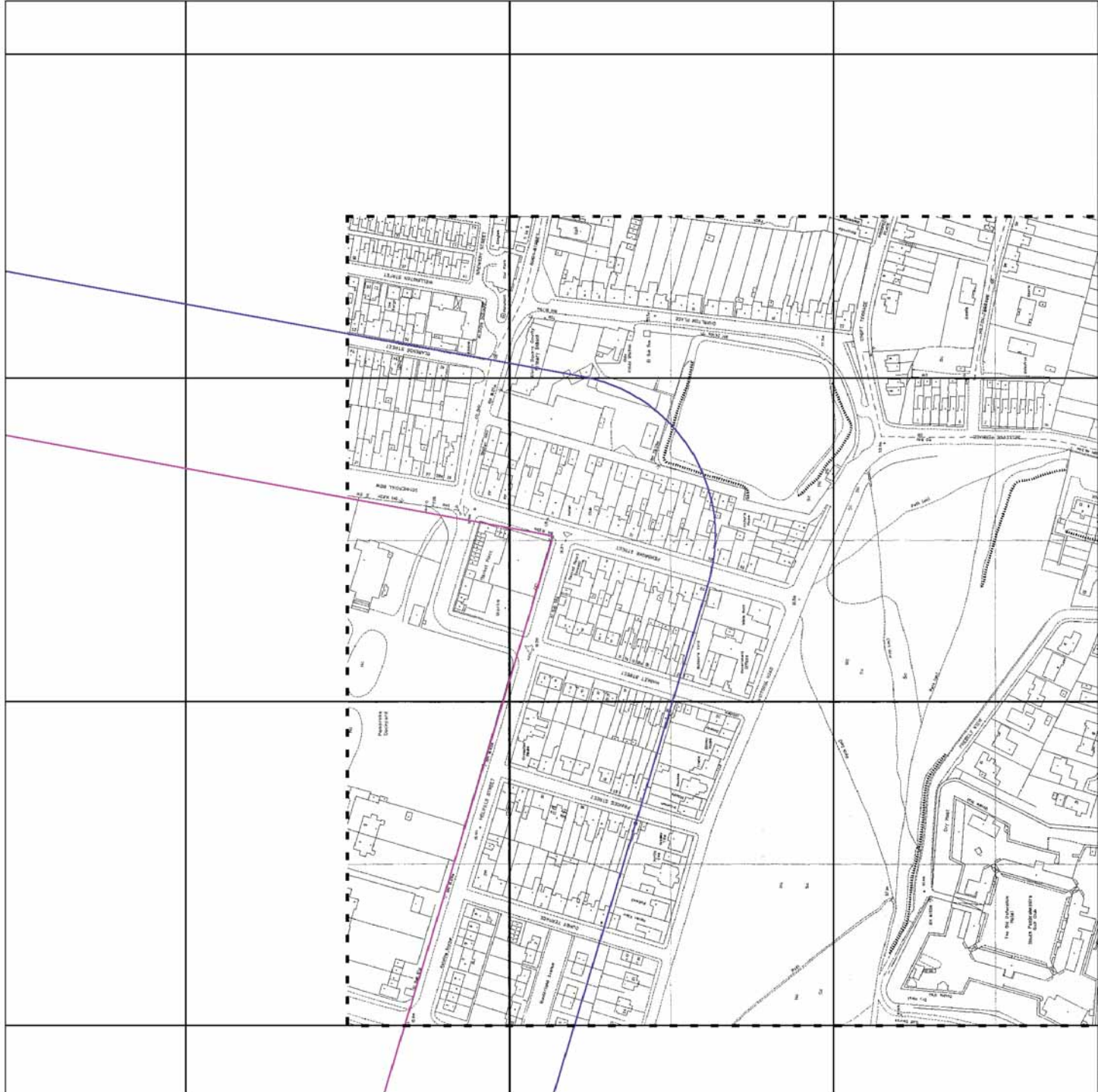
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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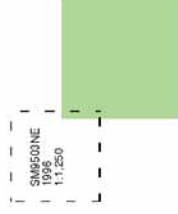


Large-Scale National Grid Data Published 1996

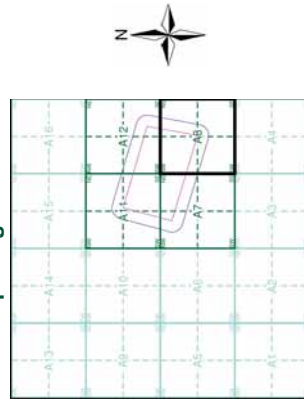
Source map scale - 1:1,250

Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's Survey Information on Microfilm) in 1992, and continued to be produced until 1999. These maps are derived from aerial photography and provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

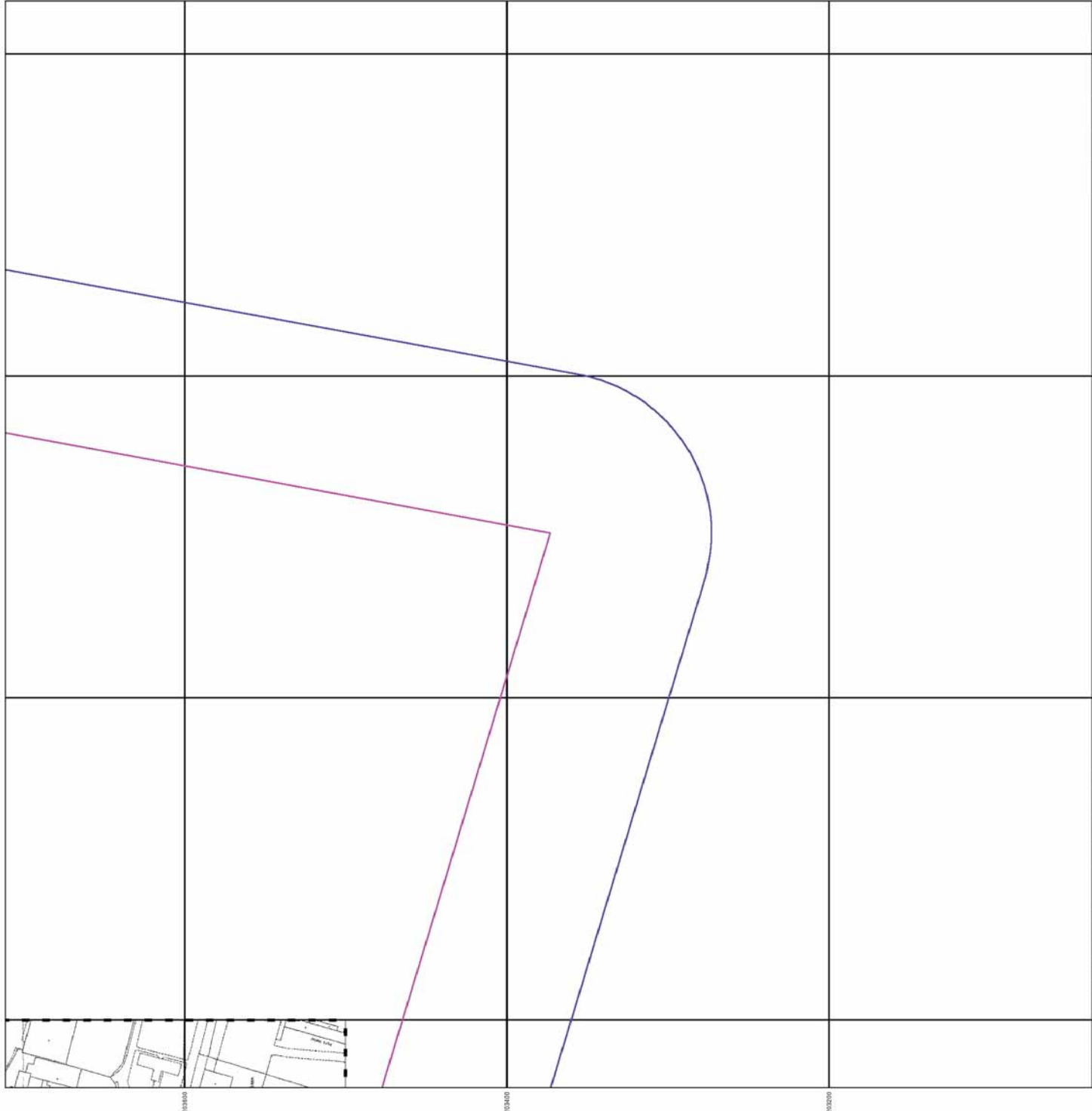
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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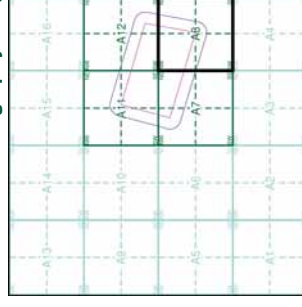


Historical Aerial Photography Published 2003

This aerial photography was produced by Geomapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain



Historical Aerial Photography - Segment A8



Order Details

Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Pembrokeshire	1:2,500	1866 - 1895	2
Pembrokeshire	1:2,500	1908	3
Ordnance Survey Plan	1:2,500	1967 - 1973	4
Additional SIMs	1:2,500	1967	5
Ordnance Survey Plan	1:1,250	1989	6
Large-Scale National Grid Data	1:1,250	1994	7
Large-Scale National Grid Data	1:1,250	1995	8
Large-Scale National Grid Data	1:1,250	1996	9
Historical Aerial Photography	1:2,500	2003	10

Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500

This legend defines symbols for various geographical features and infrastructure. It includes symbols for Quarries (Sand, Gravel, Refuse), Pits (Clay, Shingle), Sloping Masonry, Marsh, Rough Pasture, Mixed Wood, Fir, Ferry, Trig. Station, Bench Mark, Surface Level, Antiquities, Cutting, Embankment, Road crossing (Railway, Road), Level Crossing, Railway crossing (River or Canal), Road over (single stream, River or Canal), and County boundaries (Geographical, Civil Parish, Administrative, Borough, Burgh).

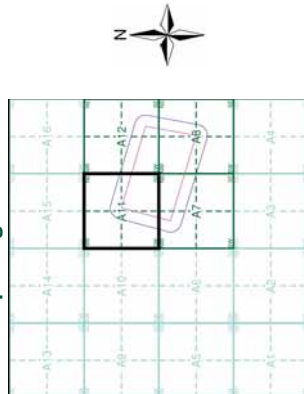
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250

This legend defines symbols for features like Inactive Quarry, Active Quarry, Clay Pit, Rock, Boulders, Roofed Building, Sloping Masonry, Archway, Non-Coniferous Tree, Coniferous Tree, Orchard, Coppice, Osier, Rough Grassland, Direction of water flow, Cave Entrance, Electricity Transmission Line, County Boundary, Civil Parish Boundary, Admin. County or County Bor. Boundary, London Borough Boundary, and Symbol marking point where boundary mereing changes.

Large-Scale National Grid Data 1:2,500 and 1:1,250

This legend defines symbols for features like Slopes, Cliff, Rock, Boulders, Positioned Boulder, Non-Coniferous Tree, Non-Coniferous Trees, Orchard, Coppice, Osier, Rough Grassland, Direction of water flow, Electricity Transmission Line, Pylon, Buildings with Building Seed, Roofed Building, Civil parish/community boundary, District boundary, County boundary, Boundary post/stone, and various symbols for Barracks, Battery, Cemetery, Chimney, Cistern, Dismantled Railway, Electricity Generating Station, Electricity Pole, Pillar, Electricity Sub Station, Filter Bed, Fountain/Drinking Ftn., Gas Gov, Gas Valve Compound, GVC, Guide Post, Mamble, Mile Post or Mile Stone, and Well.

Historical Map - Segment A11



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Site: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD





Pembrokeshire

Published 1866 - 1895

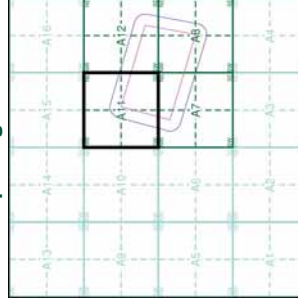
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held in the archives of the Ordnance Survey and Scotland in the 1940s. The maps were digitised at a scale of 1:2,500 and the original maps were published by the Ordnance Survey in 1866. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

039_04	1895	1:2,500
039_06	1866	1:2,500

Historical Map - Segment A11

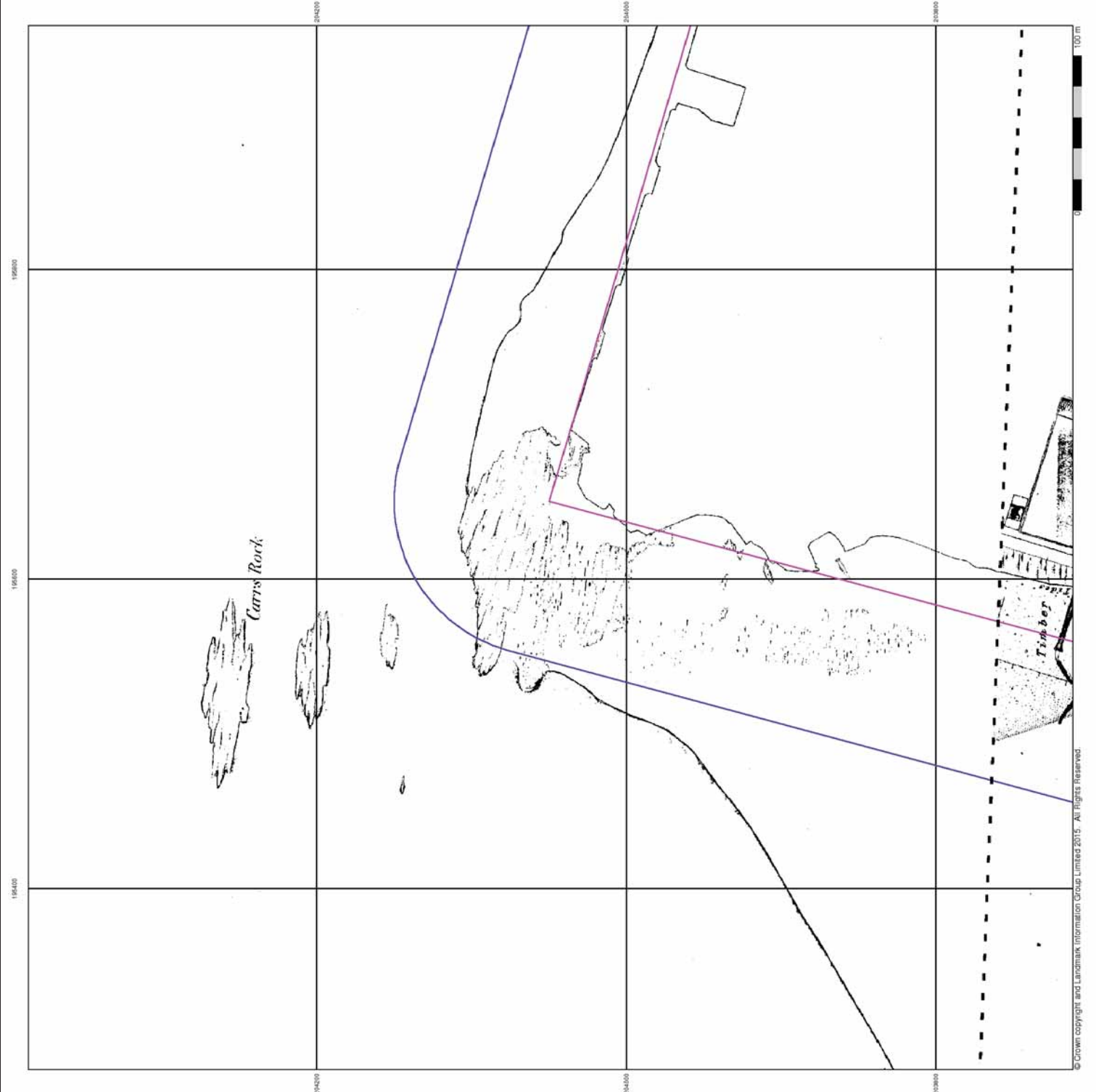


Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
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Pembrookeshire

Published 1908

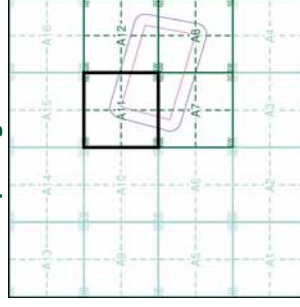
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey offices in England, Wales and Scotland in the 1940s. The maps were adopted for England, Wales and Scotland in the 1940s. The maps were published at a scale of 1:2,500 and were based on the original maps of the Ordnance Survey. The maps were published in 1908 and covered the whole of what was considered to be the unincorporated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

OS 04	1908	1:2,500
OS 06	1908	1:2,500

Historical Map - Segment A11



Order Details

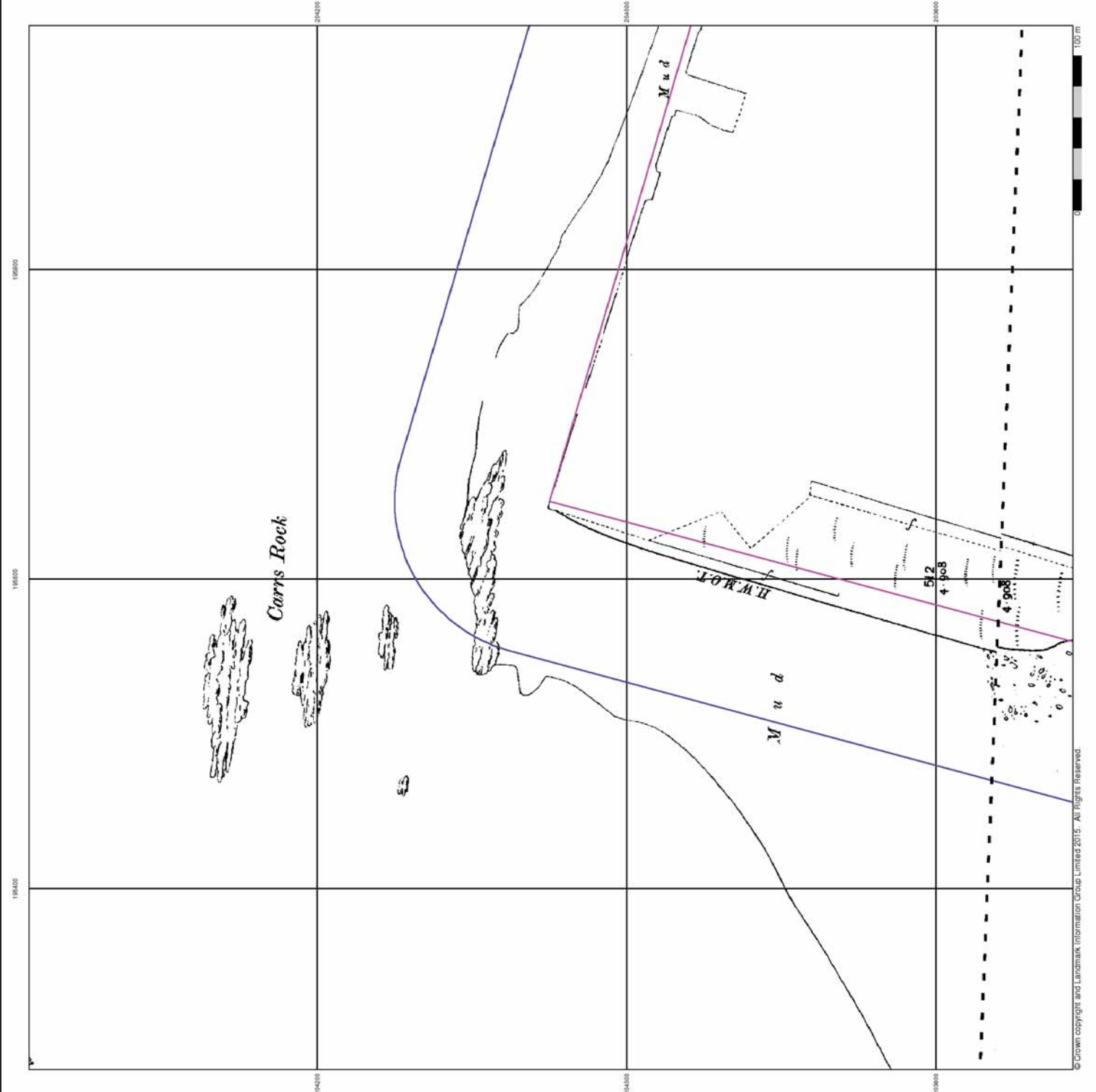
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
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Ordnance Survey Plan Published 1967 - 1973

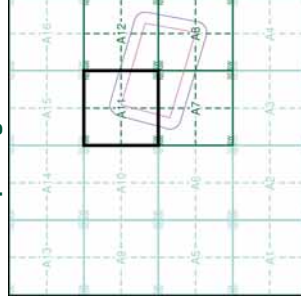
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey offices in England, Wales and Scotland in the 1970s. The maps were digitised and published by Ordnance Survey in 1984. The published date given below is often some years later than the surveyed date. Before 1938 all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SM5504	1973	1:2,500
SM5503	1967	1:2,500

Historical Map - Segment A11



Order Details

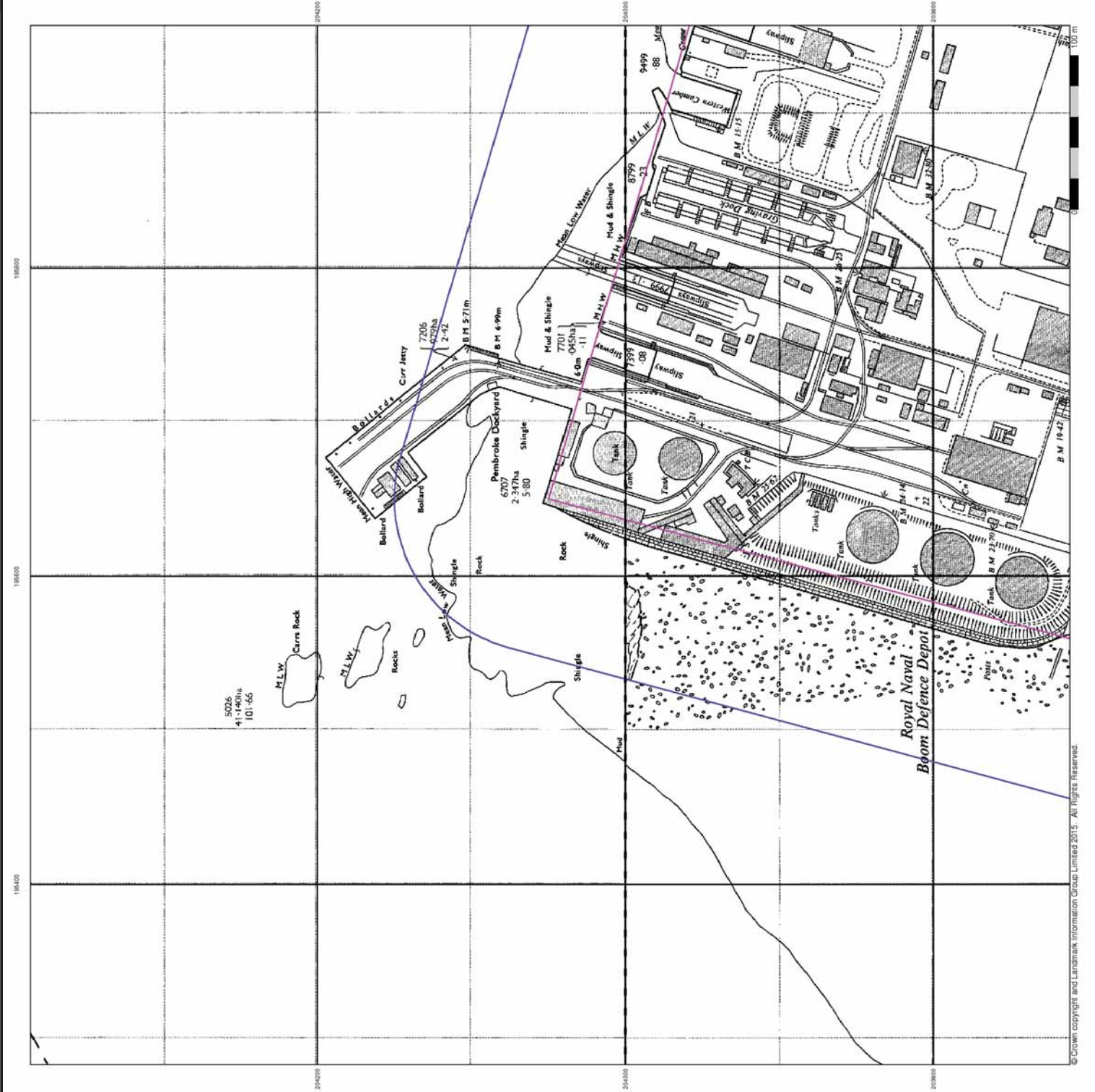
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
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Additional SIMs

Published 1967

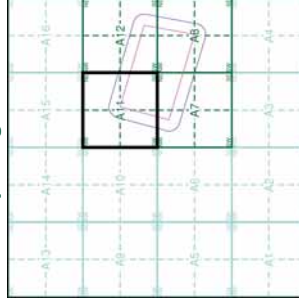
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are their minor editions, mapping which were produced and published by the Ordnance Survey between 1967 and 1987. The maps were produced in 1967 to 1984, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SM0503	1967	1:2,500
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Historical Map - Segment A11



Order Details

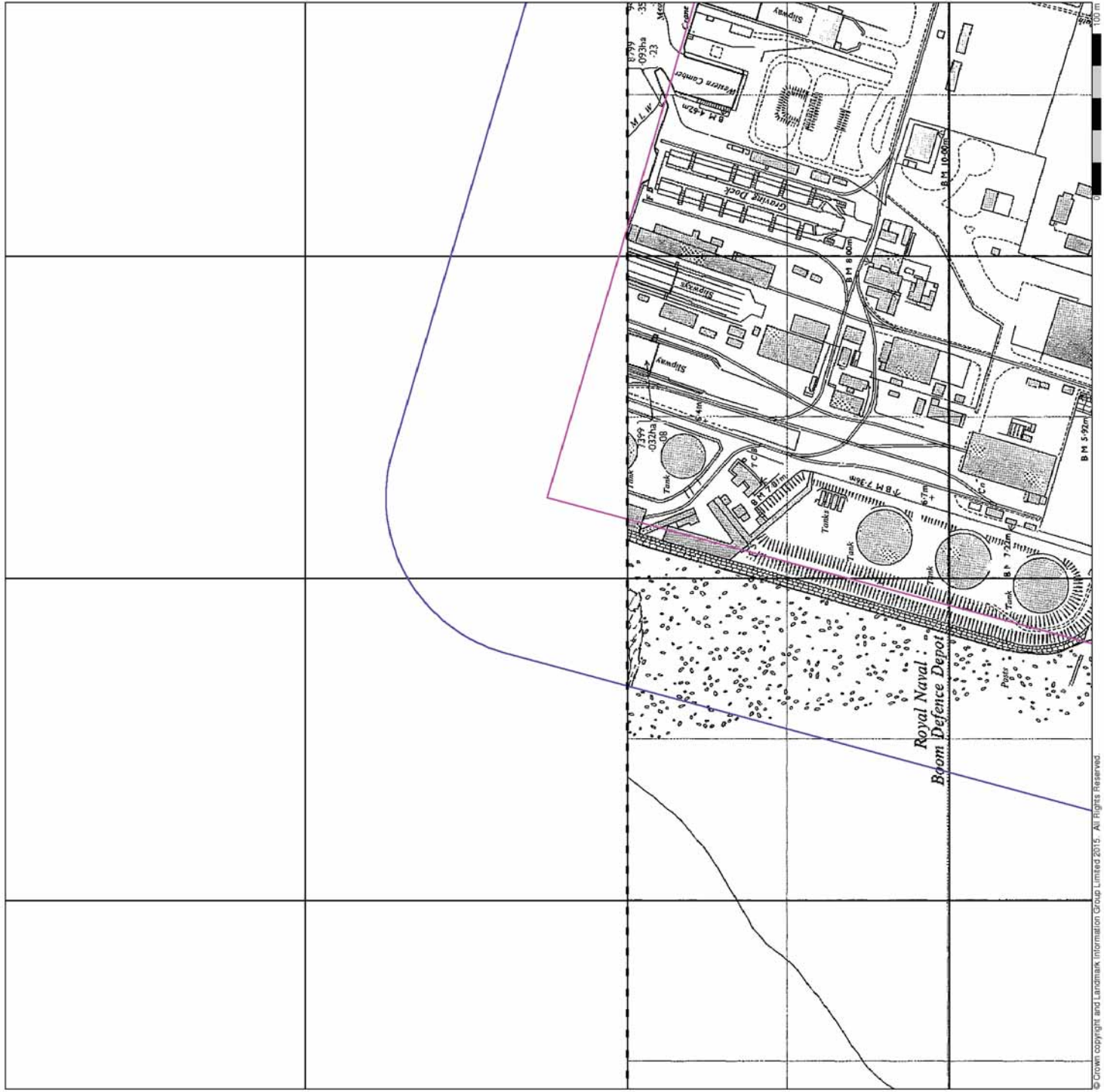
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Site: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Ordnance Survey Plan

Published 1989

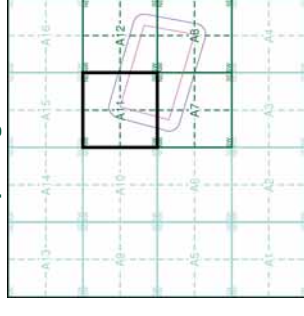
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey office in Southampton in the 1940s. The first map adopted for England, Wales and Scotland in the 1940s was published in 1854 at a scale of 1:2,500. The maps were produced by the Ordnance Survey and covered the whole of what was then considered to be the populated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

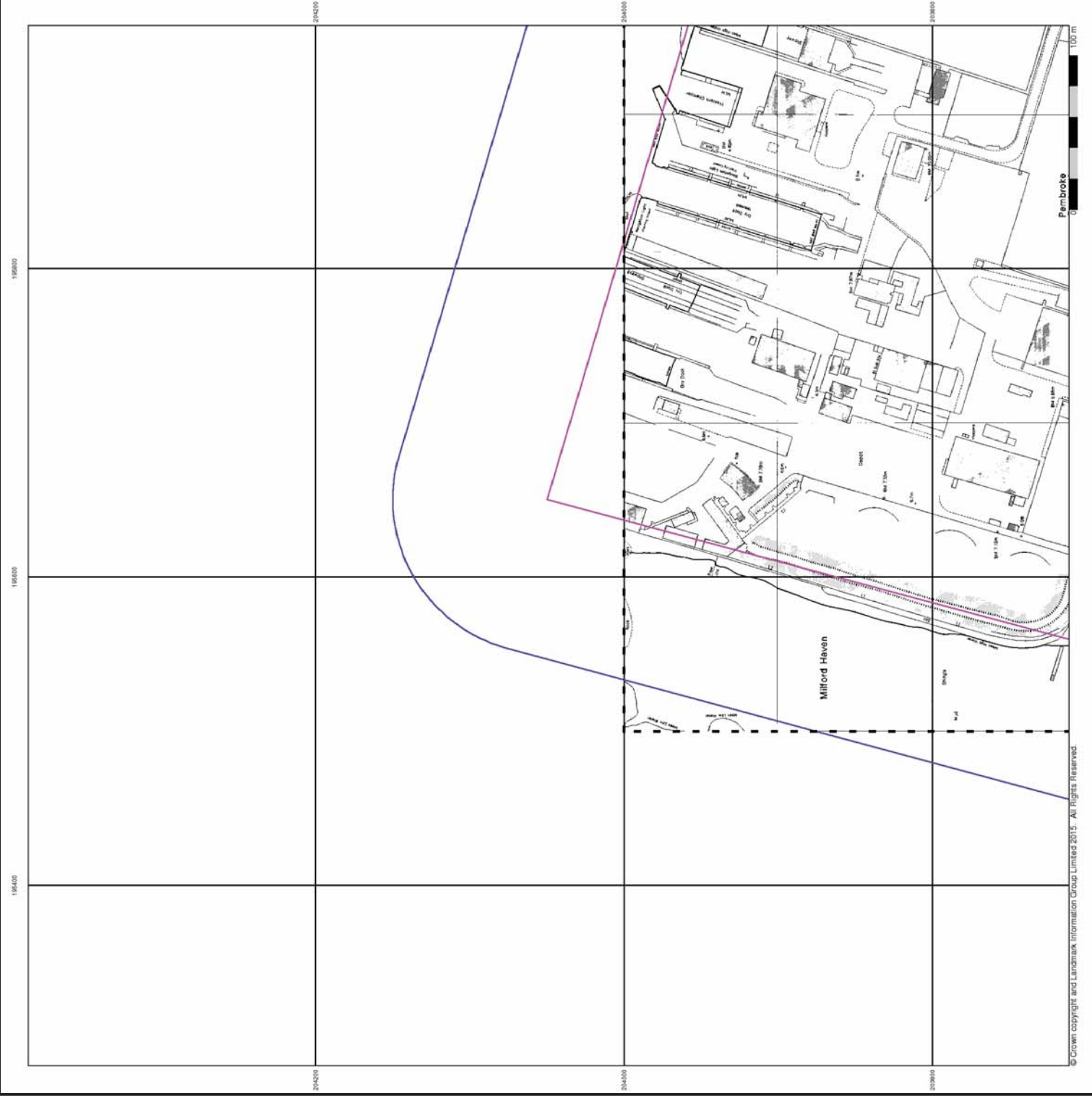
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

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Large-Scale National Grid Data Published 1994

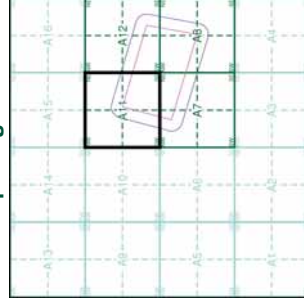
Source map scale - 1:1,250

Large Scale National Grid Data superseded SIM cards (Ordnance Survey's information on MicroSIM) in 1992, and continued to be produced until 1999. These maps were produced using aerial photography and provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SMS5048SW	SMS5048E
1994	1994
1:1,250	1:1,250
SMS5030NW	SMS5030E
1994	1994
1:1,250	1:1,250

Historical Map - Segment A11



Order Details

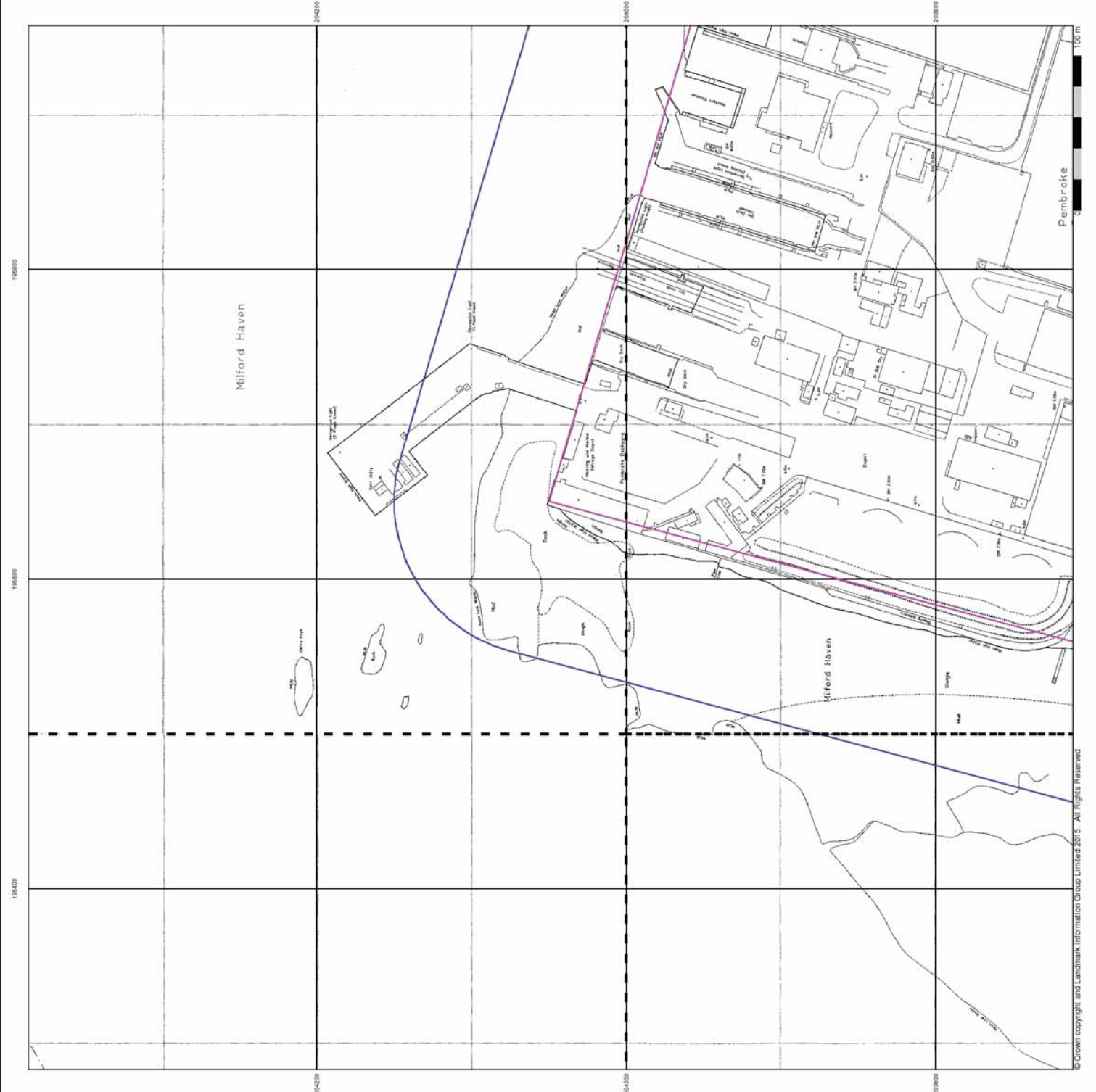
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

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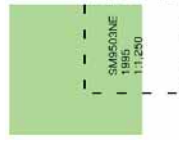


Large-Scale National Grid Data Published 1995

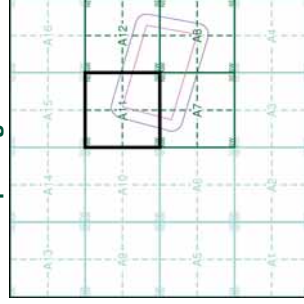
Source map scale - 1:1,250

Large Scale National Grid Data superseded SIM cards (Ordnance Survey's Simulation on Microfilm) in 1992, and continued to be produced until 1999. These maps were originally produced at a scale of 1:1,250 and provide detailed information on houses and other topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

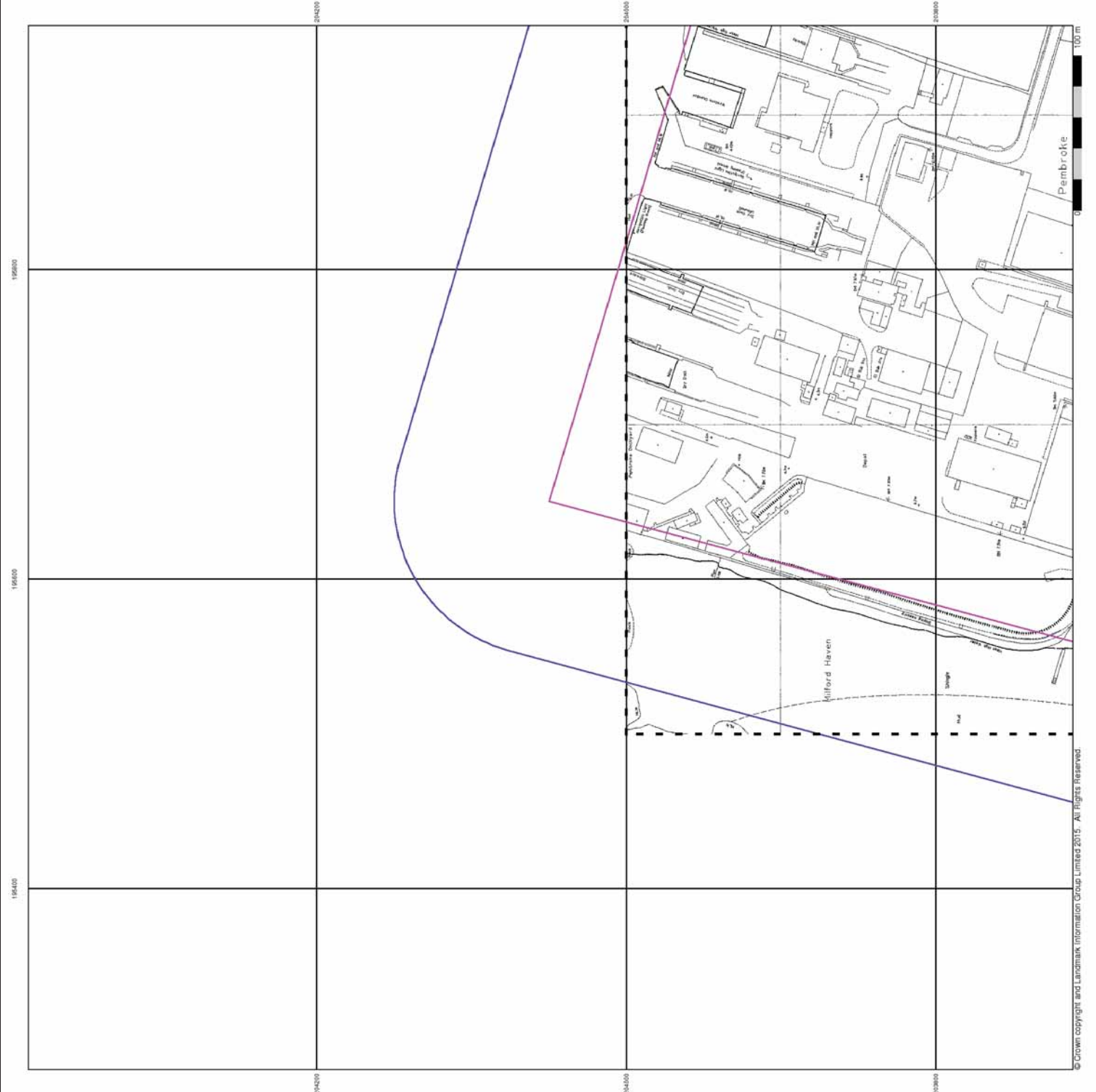
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Large-Scale National Grid Data Published 1996

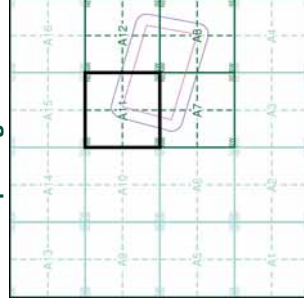
Source map scale - 1:1,250

Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's information on MicroSIM) in 1992, and continued to be produced until 1999. These maps were originally produced at a scale of 1:1,250 and provide detailed information on houses and other topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A11



Order Details

Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
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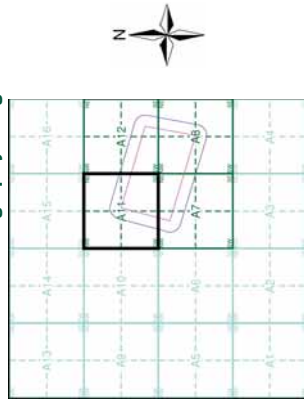


Historical Aerial Photography Published 2003

This aerial photography was produced by Geomapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain.



Historical Aerial Photography - Segment A11



Order Details

Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
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Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500

This legend defines symbols for various geographical features and infrastructure. It includes symbols for Quarries (Gravel, Sand, Refuse), Pits (Clay, Shingle), Sloping Masonry, Marsh, Rough Pasture, Mixed Wood, Fir, Ferry, Trig. Station, Bench Mark, Surface Level, Antiquities, Cutting, Embankment, Road crossing (Railway, Road), Level Crossing, Railway crossing (River or Canal), Road over (single stream, River or Canal), County Boundary, County & Civil Parish Boundary, Administrative County & Civil Parish Boundary, County Borough Boundary (England), County Borough Boundary (Scotland), Boundary Post or Stone, Bridge Road, Electricity Pylon, Foot Bridge, Foot Path, Guide Post or Board, Mile Stone, Mooring Post or Ring, Police Call Box, Pump, Signal Post, Sluice, Spring, Telephone Call Box, Trough, Well.

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250

This legend defines symbols for additional features and structures. It includes symbols for Inactive Quarry, Active Quarry, Clay Pit, Rock, Boulders, Roofed Building, Sloping Masonry, Archway, Non-Coniferous Tree (surveyed), Non-Coniferous Trees (not surveyed), Orchard Tree, Coppice/Osler, Rough Grassland, Direction of water flow, Cave Entrance, Electricity Transmission Line, County Boundary (Geographical), County & Civil Parish Boundary, Civil Parish Boundary, Admin. County or County Bor. Boundary, London Borough Boundary, Symbol marking point where boundary mereing changes, Beer House, Boundary Post or Stone, Capstan, Crane, Chimney, Drinking Fountain, Electricity Pillar or Post, Fire Alarm Pillar, Foot Bridge, Guide Post, Hydrant or Hydraulic Level Crossing, Manhole, Mile Post or Mooring Post, Mile Stone, Normal Tidal Limit, NTL, Pillar, Pole or Post, Post Office, Public Convenience, Public House, Pump, Signal Box or Bridge, Signal Post or Light, Spring, Tank or Track, Telephone Call Box, Telephone Call Post, Trough, Well, Wind Pump.

Large-Scale National Grid Data 1:2,500 and 1:1,250

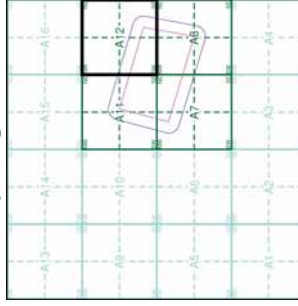
This legend defines symbols for topographical and man-made features. It includes symbols for Cliffs, Slopes, Rock, Boulders, Positioned Boulder, Non-Coniferous Tree (surveyed), Non-Coniferous Trees (not surveyed), Orchard Tree, Scrub, Reeds, Heath, Direction of water flow, Triangulation Station, Electricity Transmission Line, Pylon, Buildings with Building Seed, Roofed Building, Civil parish/community boundary, District boundary, County boundary, Boundary post/stone, Boundary mereing symbol (note: these always appear in opposed pairs or groups of three), Barracks, Battery, Cemetery, Chimney, Cistern, Dismtd Rly, El Gen Sta, El P, El Sub Sta, Electricity Sub Station, Filter Bed, Fountain/Drinking Ftn, Gas Gov, Gas Valve Compound, GVC, Guide Post, Manhole, Mile Post or Mile Stone, MP, MS, Pillar, Pole or Post, Post Office, Public Convenience, Pump, Pumping Station, Place of Worship, Sewage Ppg Sta, Sewage Pumping Station, Signal Box or Bridge, Signal Post or Light, Spring, Tank or Track, Trough, Wind Pump, Wr Pt, W.T., Water Point, Water Tap, Wks, Well.



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Pembrokeshire	1:2,500	1866 - 1895	2
Pembrokeshire	1:2,500	1908	3
Ordnance Survey Plan	1:2,500	1967 - 1973	4
Additional SIMs	1:2,500	1967 - 1990	5
Ordnance Survey Plan	1:2,500	1974 - 1976	6
Ordnance Survey Plan	1:1,250	1989	7
Additional SIMs	1:1,250	1990	8
Large-Scale National Grid Data	1:1,250	1994	9
Large-Scale National Grid Data	1:1,250	1994 - 1995	10
Large-Scale National Grid Data	1:1,250	1996	11
Historical Aerial Photography	1:2,500	2003	12

Historical Map - Segment A12



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD





Pembrokeshire

Published 1866 - 1895

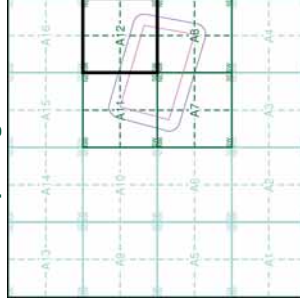
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey (OS) archives in the UK. The maps were digitised at a scale of 1:2,500 and are based on the original maps published by OS in the 1860s and 1890s. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

039_04	1895	1:2,500
039_06	1866	1:2,500

Historical Map - Segment A12



Order Details

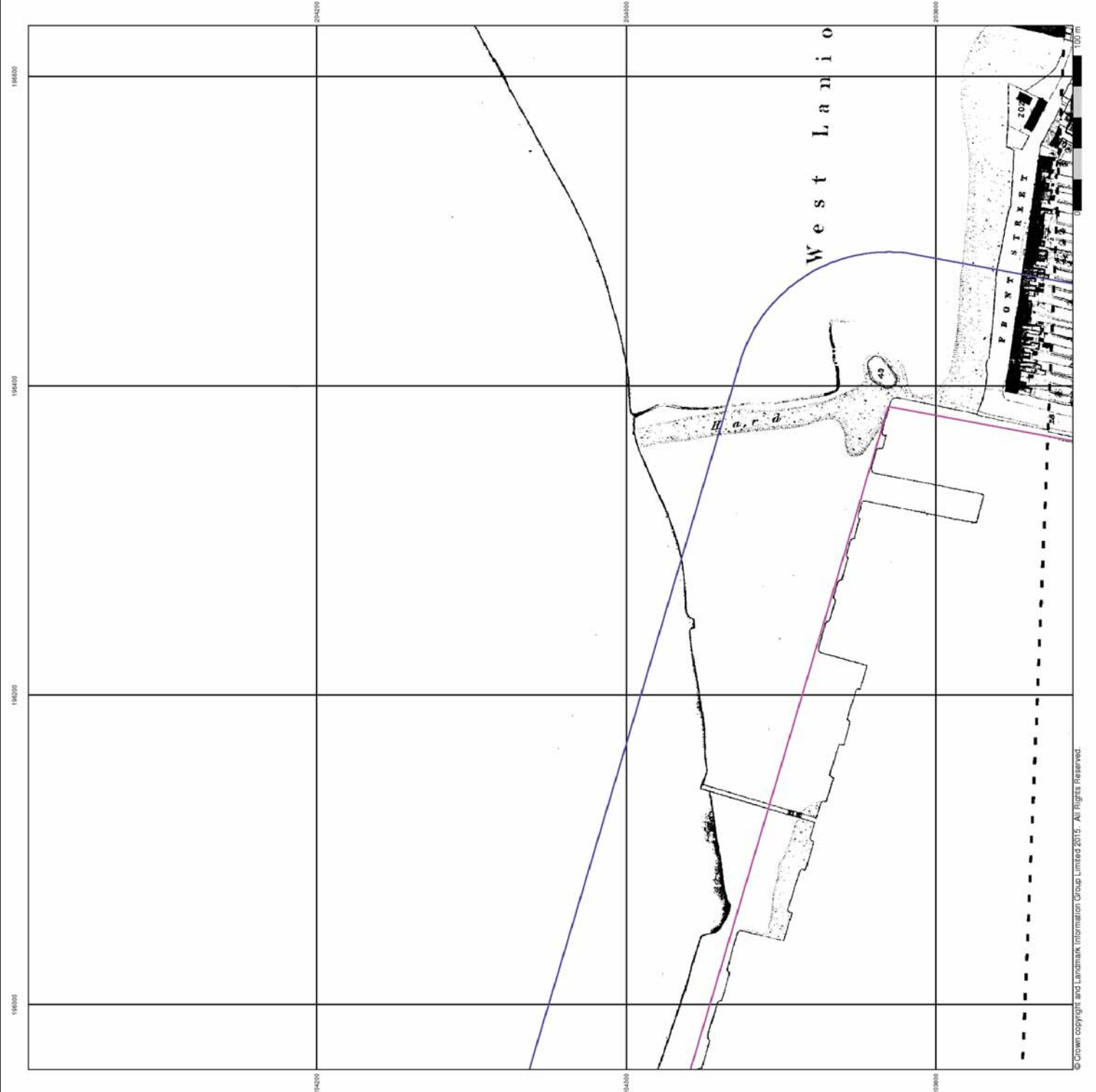
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

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Pembrokeshire

Published 1908

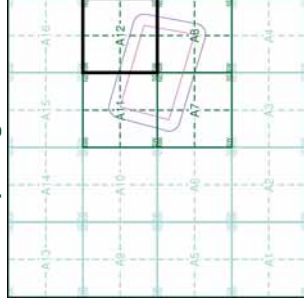
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey, Warley, Birmingham, and published in the 1908 edition of the 1:2,500 scale maps of Pembrokeshire. The maps were surveyed between 1854 and 1896, and cover the whole of what was then considered to be the unincorporated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

039_04	1908	1:2,500
039_05	1908	1:2,500

Historical Map - Segment A12



Order Details

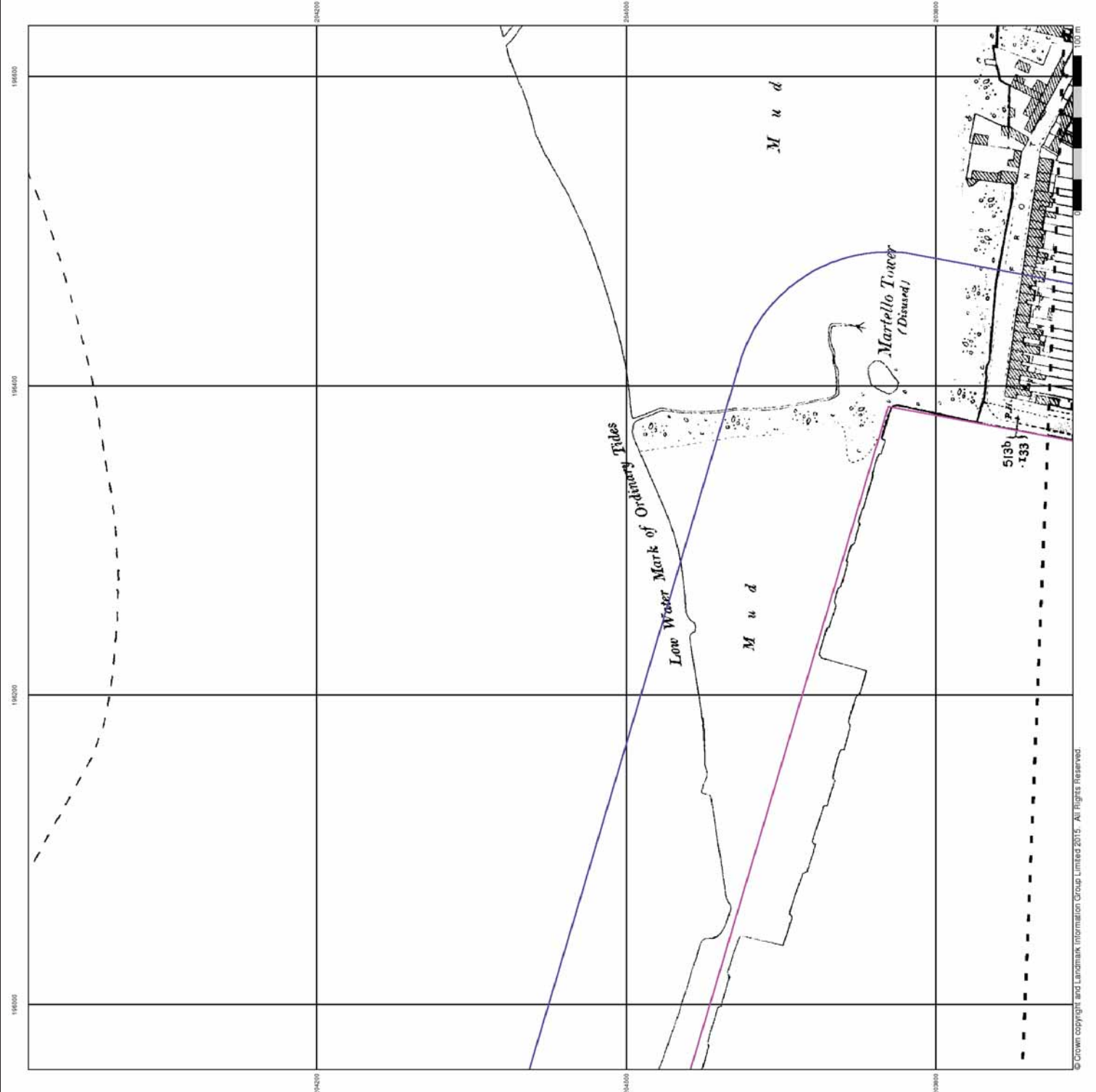
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

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Ordnance Survey Plan Published 1967 - 1973

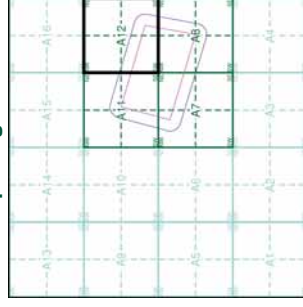
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey office in Southampton in the 1940s - 1964. The maps were digitised and published by Ordnance Survey in 1967. The published date given below is often some years later than the surveyed date. Before 1938 all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SM9504	1973	12,500
SM9504	1968	12,500
SM9503	1967	12,500
SM9503	1968	12,500

Historical Map - Segment A12



Order Details

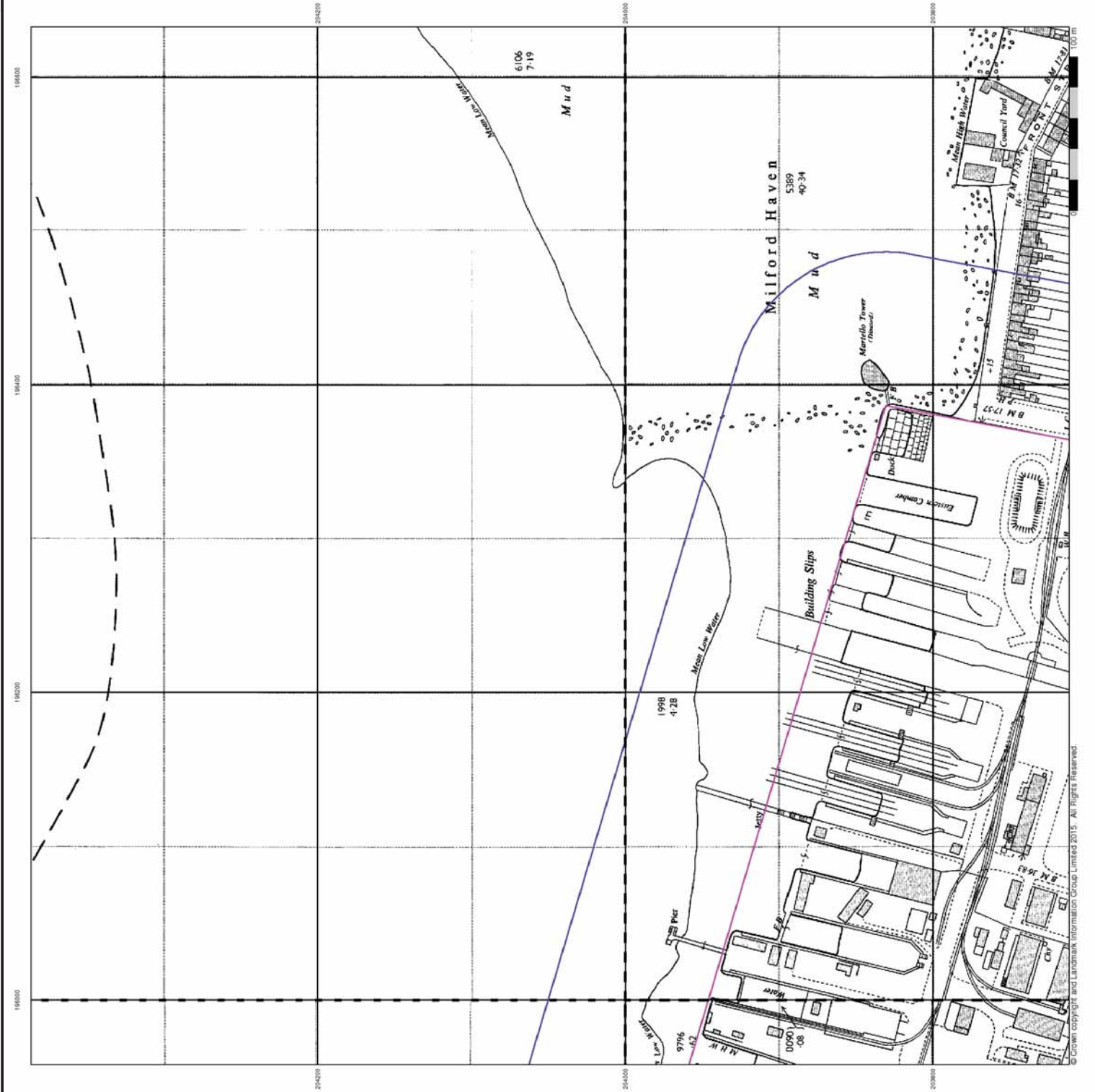
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Additional SIMs

Published 1967 - 1990

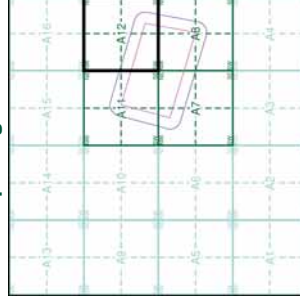
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are their major editions of mapping which were produced and published in 1967, 1977, 1984, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SM9004	1990	1:2,500
SM8503	1967	1:2,500

Historical Map - Segment A12



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

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Ordnance Survey Plan

Published 1989

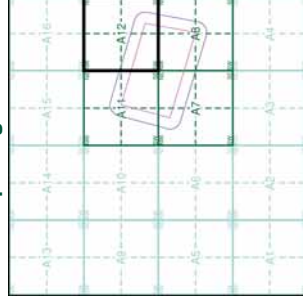
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey offices in England, Wales and Scotland in the 1940s. The maps were digitised and published by Ordnance Survey in 1989. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SM1603NE	SM1603NW	SM1604SE
1949	1949	1949
1:1,250	1:1,250	1:1,250

Historical Map - Segment A12



Order Details

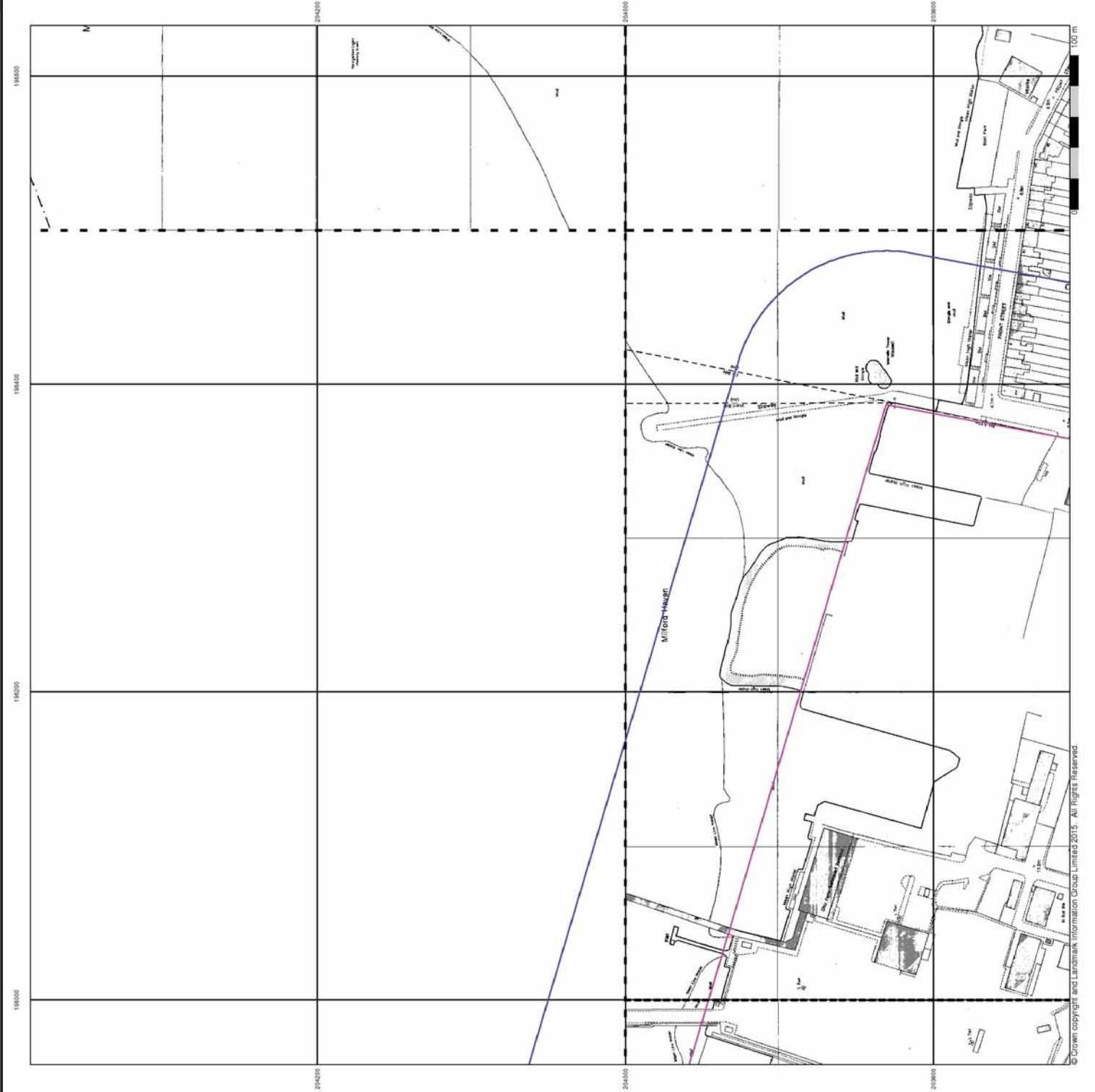
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

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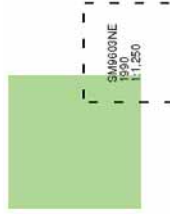
Additional SIMs

Published 1990

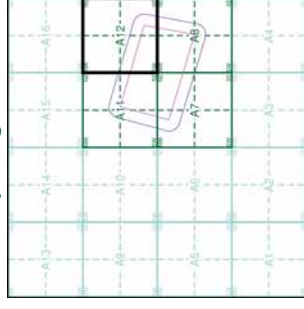
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') are their minor editions. Mapping which were produced and published in 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

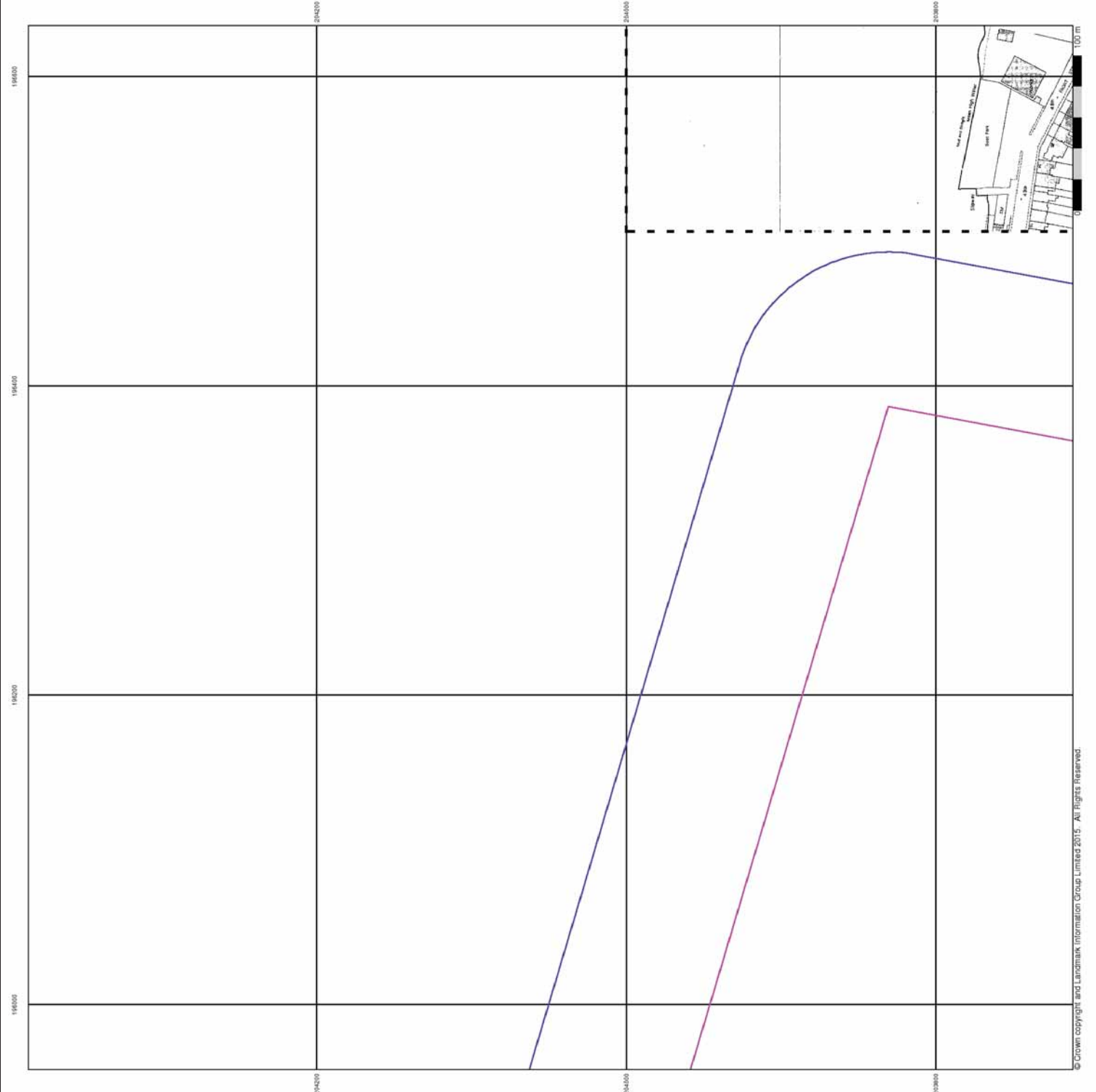
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

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Large-Scale National Grid Data Published 1994

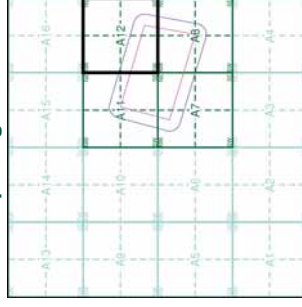
Source map scale - 1:1,250

Large Scale National Grid Data superseded SIM cards (Ordnance Survey's information on microfilm) in 1992, and continued to be produced until 1999. The maps were originally published at a scale of 1:1,250 and provide detailed information on houses and other topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SM9604SE	1994	1:1,250	SM9604SE	1994	1:1,250
SM9603SW	1994	1:1,250	SM9603NE	1994	1:1,250
SM9603NW	1994	1:1,250	SM9602NE	1994	1:1,250

Historical Map - Segment A12



Order Details

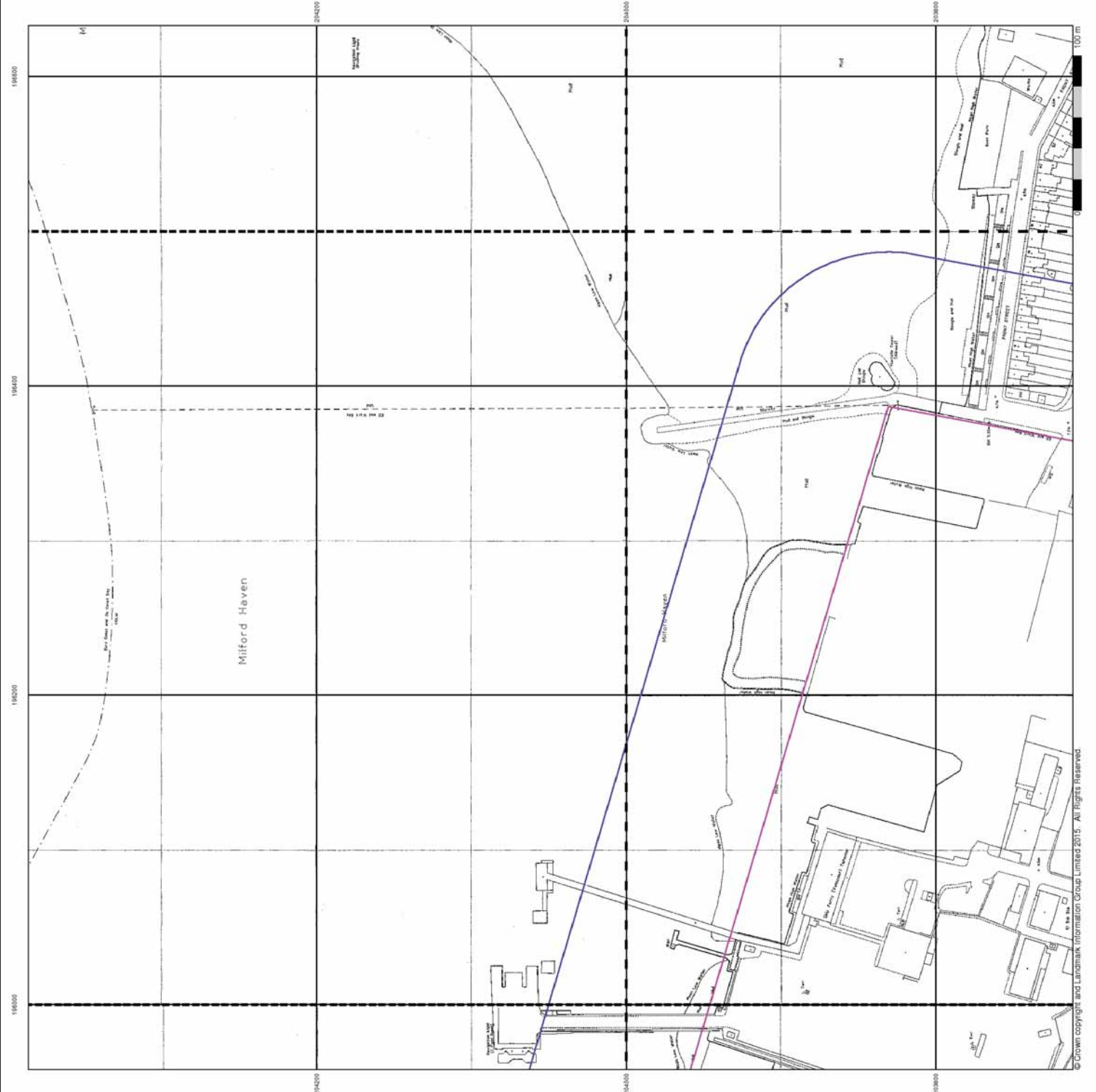
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

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Large-Scale National Grid Data

Published 1994 - 1995

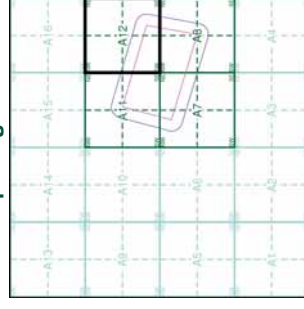
Source map scale - 1:1,250

Large Scale National Grid Data superseded SIM cards (Ordnance Survey's information on microfilm) in 1992, and continued to be produced until 1999. These maps were produced as digital maps at all scales, provide detailed information on buildings and roads, but tend to miss topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SMESOPONE	1995	1:1,250
SMESOPNW	1995	1:1,250
SMESOPNE	1994	1:1,250

Historical Map - Segment A12



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 195690, 203730
 Slice: A
 Site Area (Ha): 36.27
 Search Buffer (m): 100

Site Details

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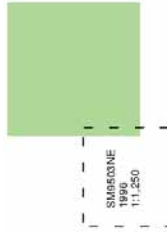
Large-Scale National Grid Data

Published 1996

Source map scale - 1:1,250

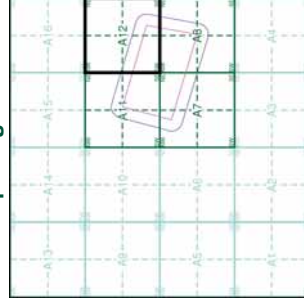
Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's information on Microform) in 1992, and continued to be produced until 1999. These maps are the original mapping and provide detailed information on roads, houses and other topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



SHARDSTONE
1996
1:1,250

Historical Map - Segment A12



Order Details

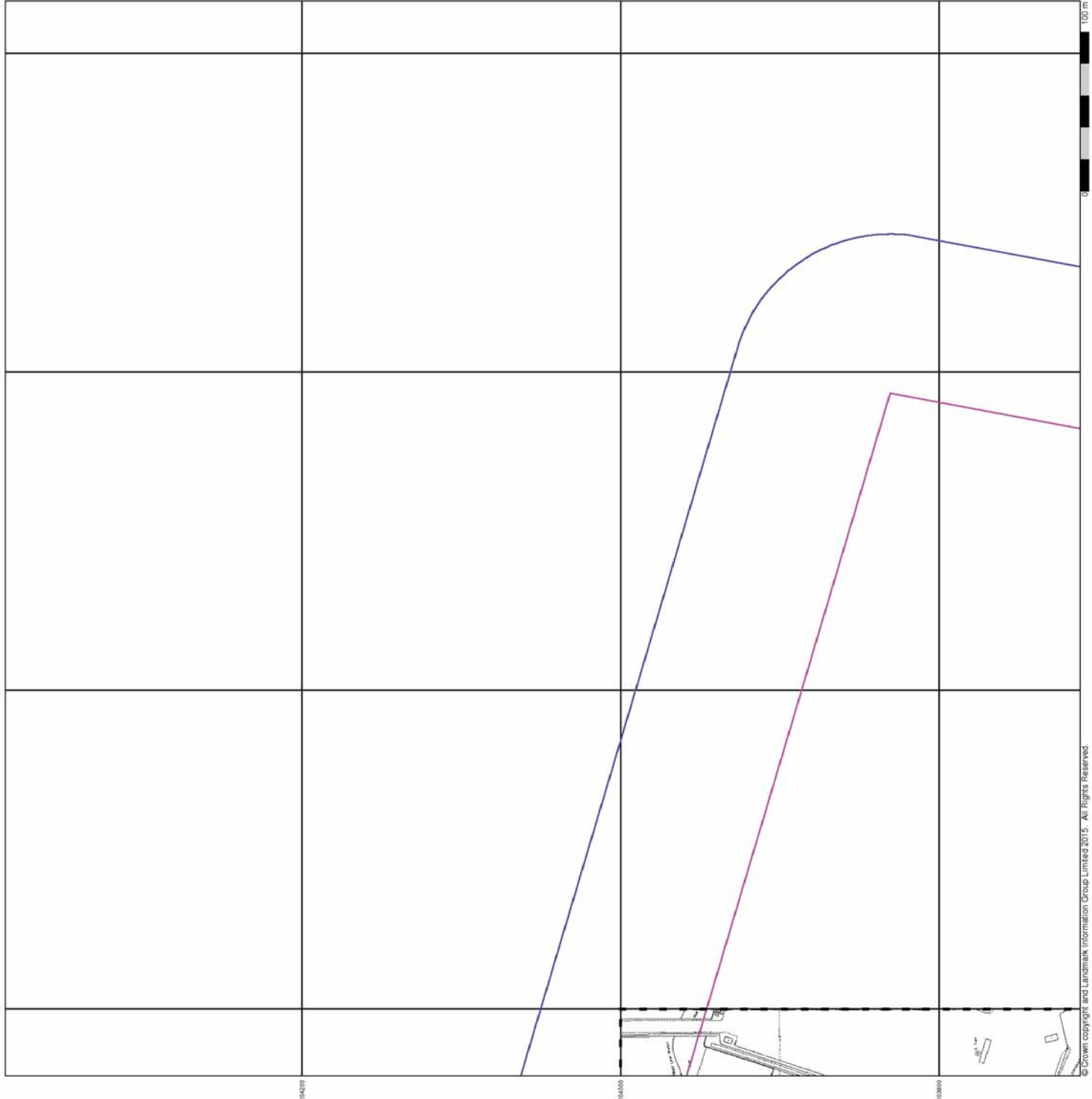
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195690, 203730
Slice: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

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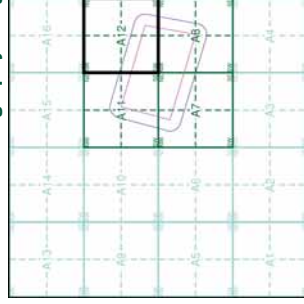


Historical Aerial Photography Published 2003

This aerial photography was produced by Geomapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain.



Historical Aerial Photography - Segment A12



Order Details

Order Number: 152819812_1_1
Customer Ref: JERT262
National Grid Reference: 195690, 203730
Site: A
Site Area (Ha): 36.27
Search Buffer (m): 100

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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Groundwater Vulnerability

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID

Agency and Hydrological

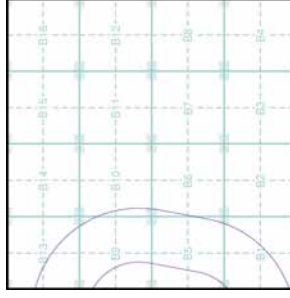
Geological Classes

- Major Aquifer (Highly Permeable)
- Minor Aquifer (Variably Permeable)
- Non Aquifer (Negligibly Permeable)
- Water or Sea
- Drift Deposit

Soil Classes

- High (H) 1, 2, 3, U
- Intermediate (I) 1, 2
- Low
- High (H) 1, 2, 3, U
- Intermediate (I) 1, 2
- Low

Site Sensitivity Context Map - Slice B



Order Details

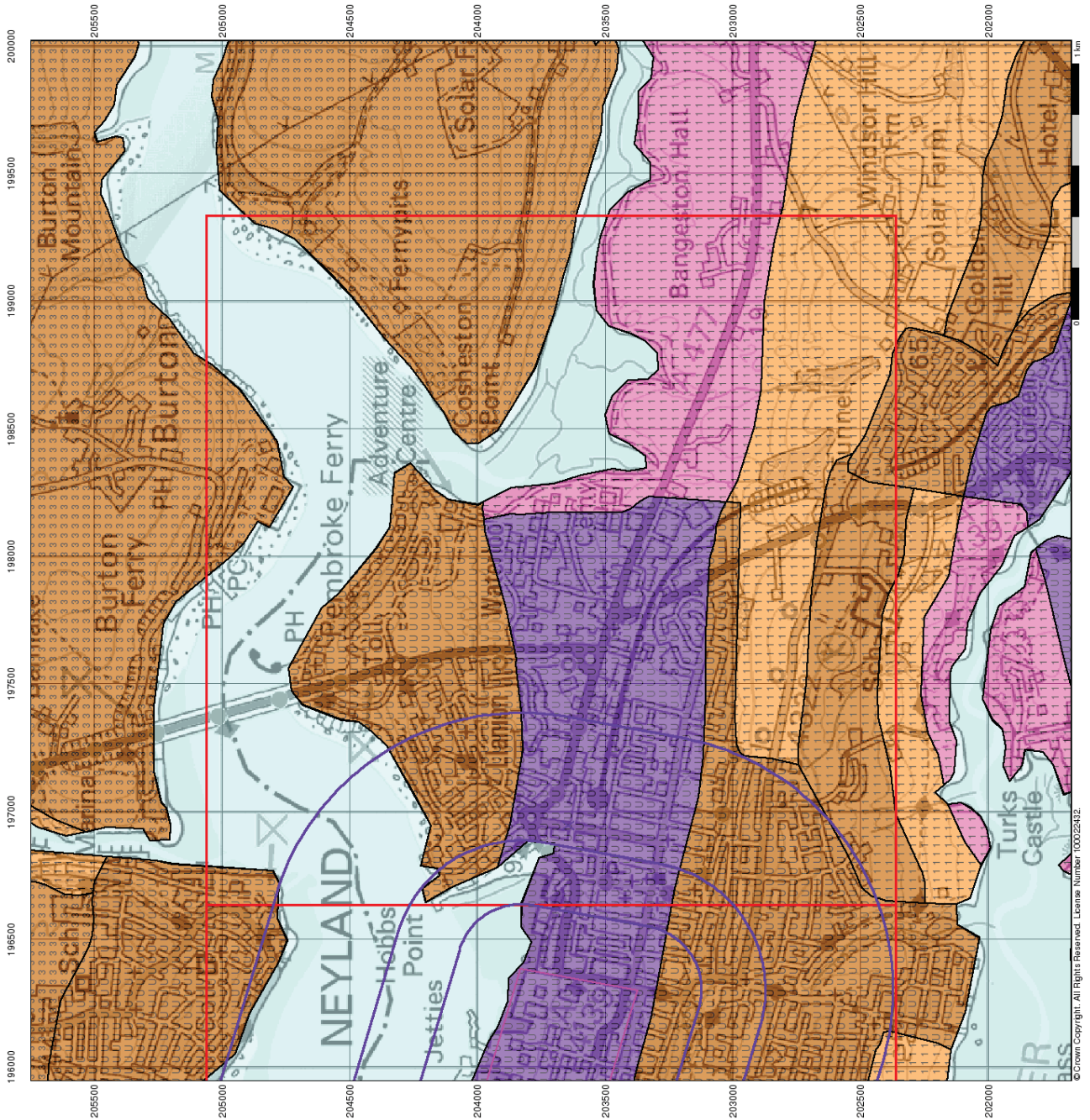
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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 Web: www.envirock.co.uk





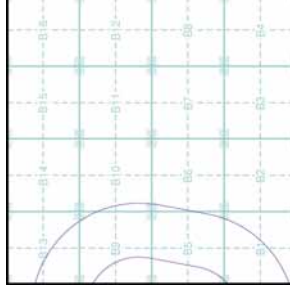
Bedrock Aquifer Designation

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Site
 - Map ID

Agency and Hydrological

- Geological Classes**
- Principal Aquifer
 - Secondary A Aquifer
 - Secondary B Aquifer
 - Secondary Undifferentiated
 - Unproductive Strata
 - Unknown
 - Unknown (Lakes and Landlip)

Site Sensitivity Context Map - Slice B



Order Details

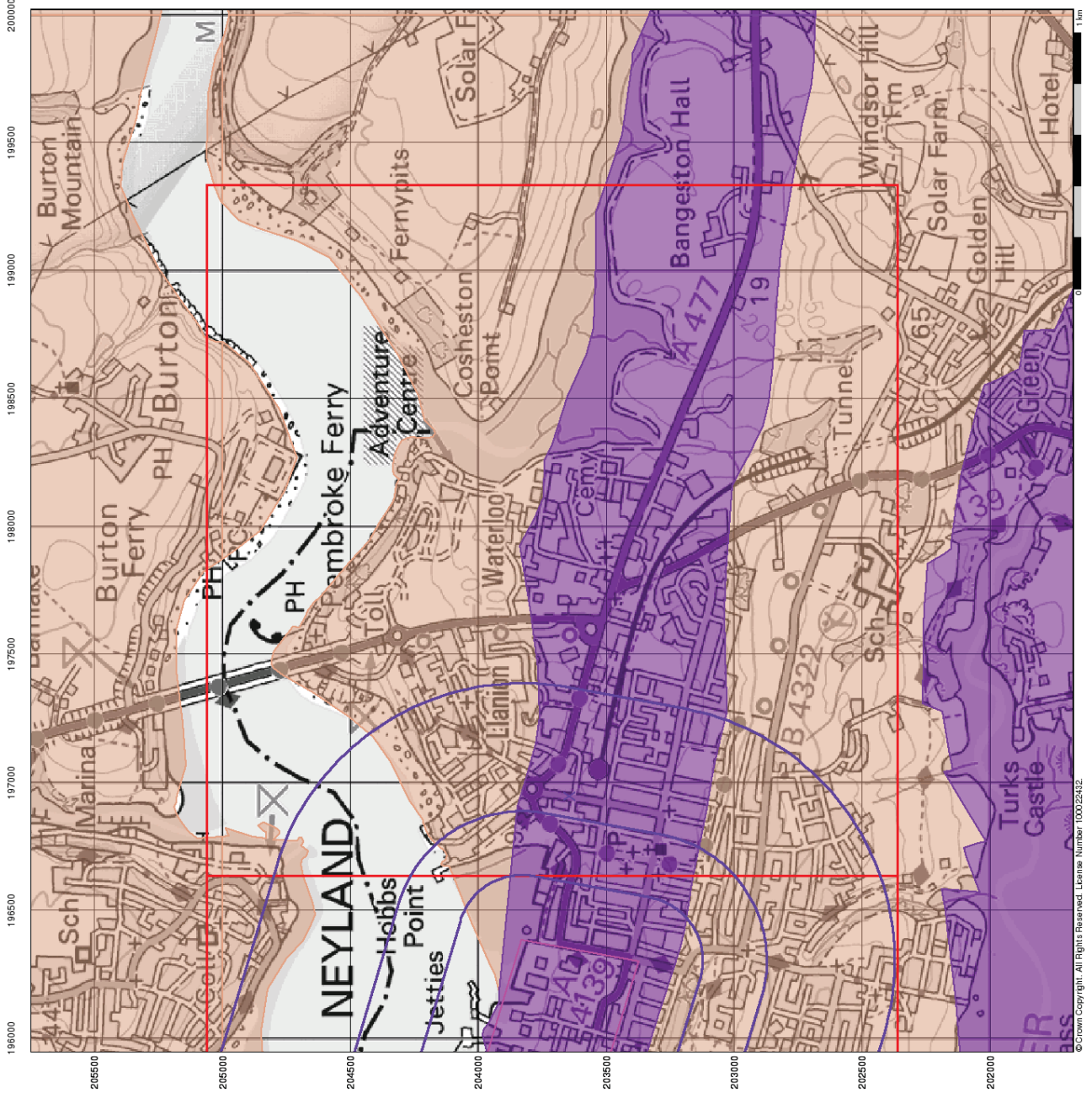
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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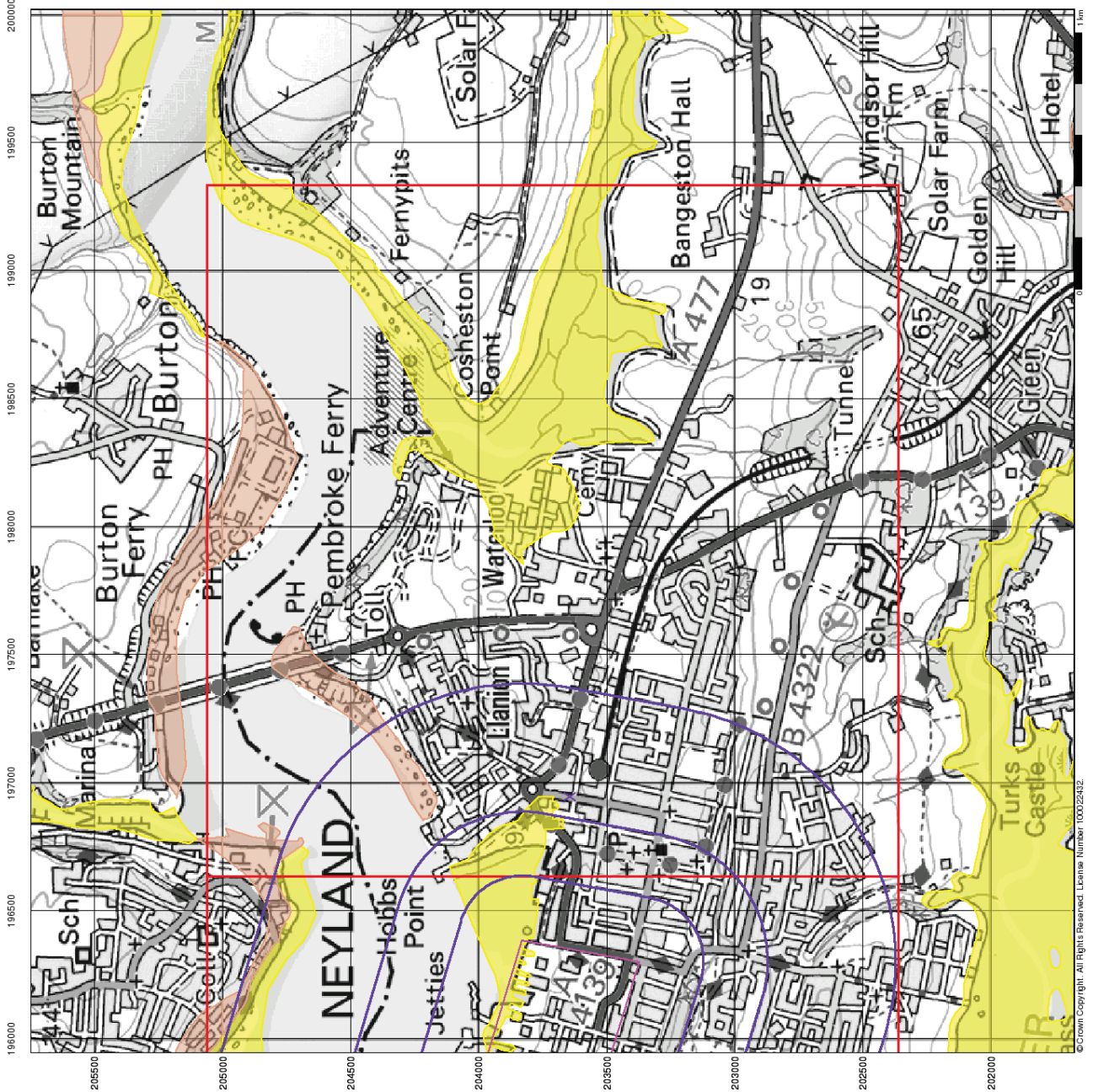


Superficial Aquifer Designation

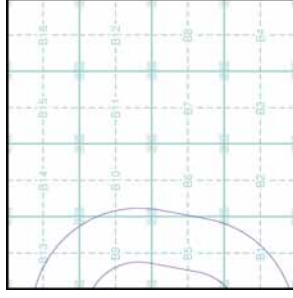
- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Site
 - Map ID

Agency and Hydrological

- Geological Classes**
- Principal Aquifer
 - Secondary A Aquifer
 - Secondary B Aquifer
 - Secondary Undifferentiated
 - Unproductive Strata
 - Unknown
 - Unknown (Lakes and Landlip)



Site Sensitivity Context Map - Slice B



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



Tel: 0844 844 9952
 Fax: 0844 844 9951
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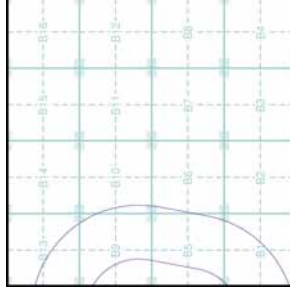
Source Protection Zones

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Site
 - Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special Interest (Zone 4)
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice B



Order Details

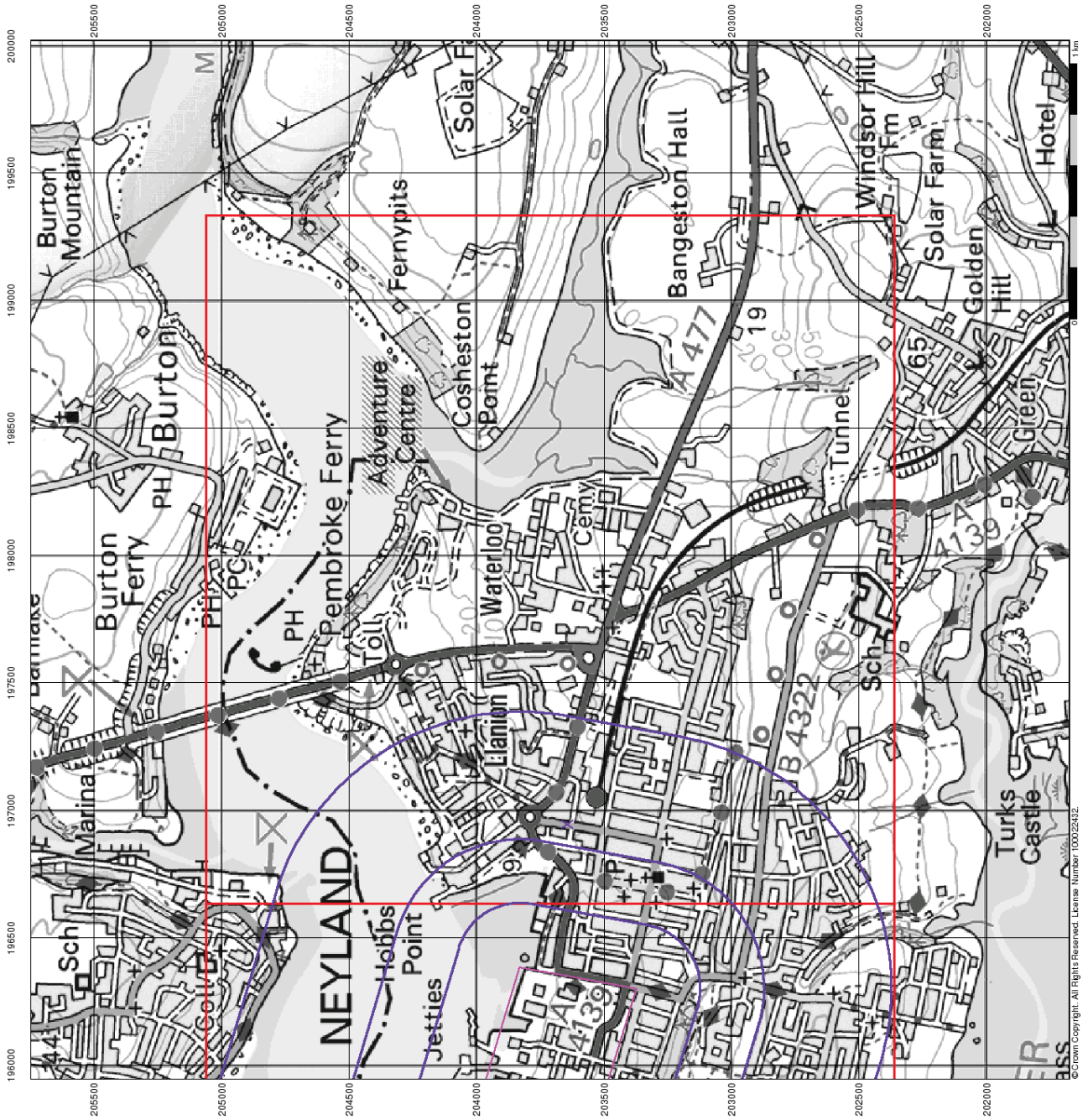
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
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 Site Area (Ha): 36.27
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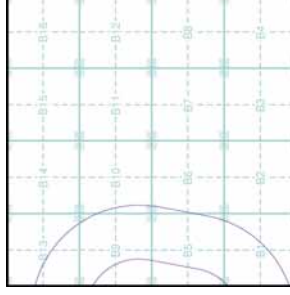




Sensitive Land Uses

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Slice
 - Map ID
- Sensitive Land Uses**
- Ancient Woodland
 - Area of Adopted Green Belt
 - Area of Unadopted Green Belt
 - Area of Outstanding Natural Beauty
 - Environmentally Sensitive Area
 - Forest Park
 - Local Nature Reserve
 - Marine Nature Reserve
 - National Nature Reserve
 - National Park
 - Nitrate Sensitive Area
 - Nitrate Vulnerable Zone
 - Ramsar Site
 - Site of Special Scientific Interest
 - Special Area of Conservation
 - Special Protection Area
 - World Heritage Sites

Site Sensitivity Context Map - Slice B



Order Details

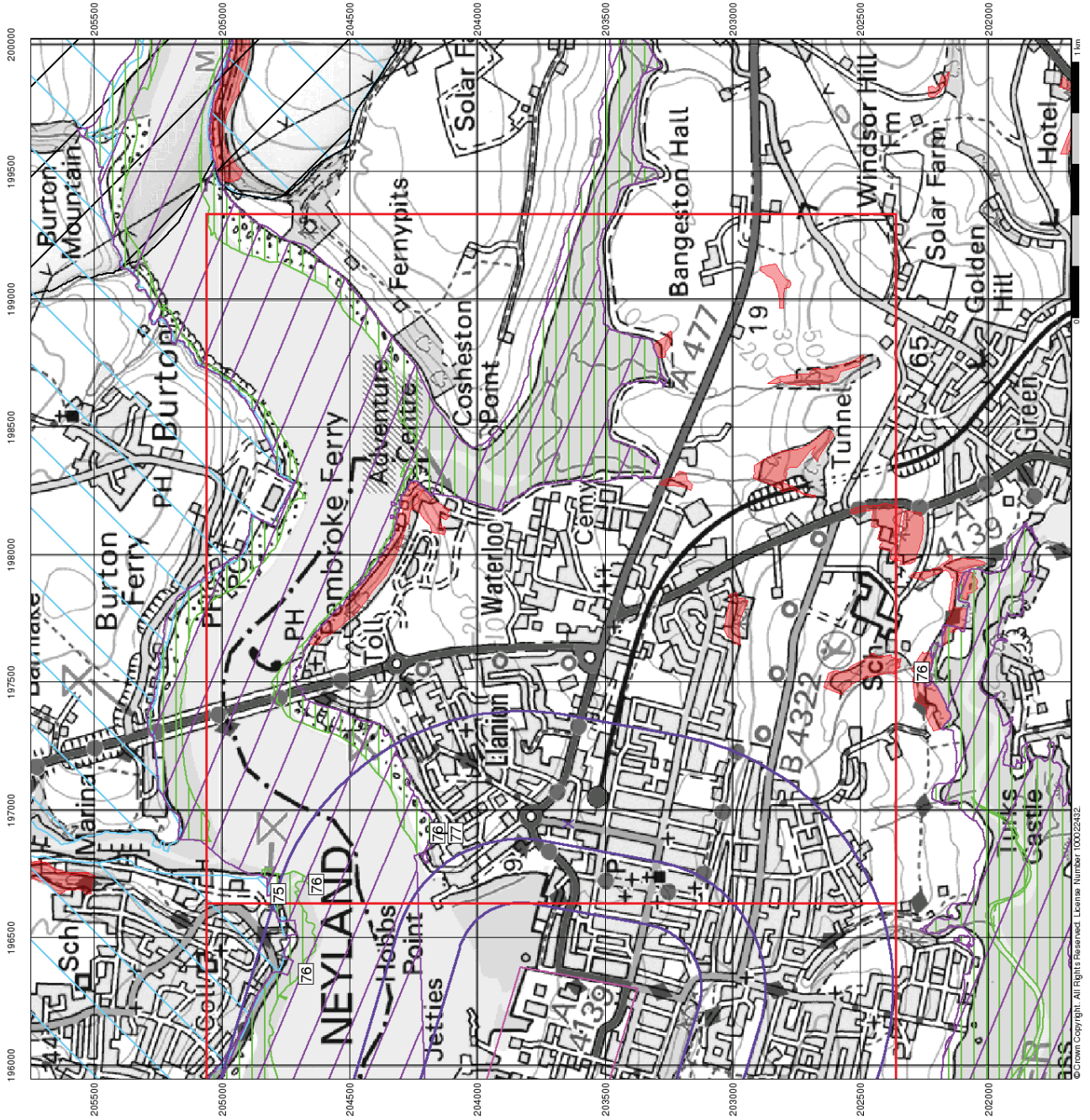
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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BGS Flood GFS Data

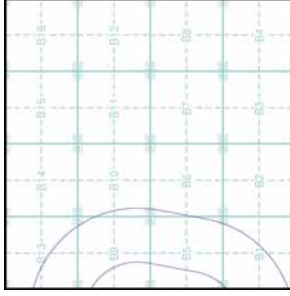
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice B



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



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 Fax: 0844 844 9951
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Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

152819812_1_1

Customer Reference:

JER1262

National Grid Reference:

196950, 203650

Slice:

B

Site Area (Ha):

36.27

Search Buffer (m):

1000

Site Details:

Milford Haven Port Authority
Captain Superintendents Building
Admiralty Way, The Dockyard
PEMBROKE DOCK
SA72 6TD

Client Details:

Ms A Thomas
RPS Consultants
260 Park Avenue
Aztec West
Almondsbury
Bristol
BS32 4SY

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	7
Hazardous Substances	-
Geological	9
Industrial Land Use	11
Sensitive Land Use	21
Data Currency	22
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Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2			7	1
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 4			2	2
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 5		Yes		
Pollution Incidents to Controlled Waters	pg 5			4	
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 6				1
Water Abstractions					
Water Industry Act Referrals					
Groundwater Vulnerability	pg 6	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 6	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 6	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 6	Yes		n/a	n/a
Flooding from Rivers or Sea without Defences	pg 6	Yes		n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 6			2	

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 7				1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 7	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 7				1
Potentially Infilled Land (Non-Water)	pg 7				2
Potentially Infilled Land (Water)	pg 7		1	2	
Registered Landfill Sites	pg 7		1	1	
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 9	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 9	Yes	Yes		
BGS Recorded Mineral Sites	pg 9				1
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities	pg 9				1
Non Coal Mining Areas of Great Britain	pg 9	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 9	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 9	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 10	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 10	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 10	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 10	Yes		n/a	n/a
Radon Potential - Radon Affected Areas	pg 10	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures	pg 10	Yes	n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 11			23	27
Fuel Station Entries	pg 15			1	1
Points of Interest - Commercial Services	pg 15			11	10
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 17			3	4
Points of Interest - Public Infrastructure	pg 18			3	10
Points of Interest - Recreational and Environmental	pg 19			2	7
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas	pg 21				1
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest	pg 21	1			
Special Areas of Conservation	pg 21	1			
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	196200 203700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B5NW (SW)	0	1	196900 203550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	196150 203850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	196450 203750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SW (NW)	0	1	196650 203800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	196600 203645
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	196250 203750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	196150 203900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	196400 203500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	196150 203550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	196500 203550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	196100 203800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	196350 203800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	196450 203650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	196050 203450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	4	1	196050 203950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B9SW (NW)	14	1	196800 203850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	33	1	196100 203400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	48	1	196050 203400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	67	1	196150 203350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	77	1	195950 203400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	81	1	196100 203350

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	85	1	196250 203300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	100	1	196200 203300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	123	1	196350 203250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	127	1	196600 203700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	163	1	196600 203550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	203	1	196600 203600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B9SW (NW)	216	1	196700 203750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B5NW (NW)	225	1	196947 203645
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B5NW (W)	234	1	196700 203645
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B5NW (W)	252	1	196700 203600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B9NW (NW)	343	1	196700 204050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SW (NW)	357	1	196750 204000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SW (NW)	383	1	196800 203950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SW (NW)	415	1	196850 203850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SW (N)	420	1	196947 203850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B5SW (S)	480	1	196800 203200
1	Discharge Consents Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Lwr Meyrick St.Swo.Pemb Pem Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: Bp0066201 Permit Version: 2 Effective Date: 19th October 1989 Issued Date: 19th October 1989 Revocation Date: 19th October 1989 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Milford Haven Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	B9SW (NW)	384	2	196760 203740

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Lwr Meyrick St.Swo.Pemb Pem Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: Bp0066201 Permit Version: 1 Effective Date: 9th October 1987 Issued Date: 9th October 1987 Revocation Date: 18th October 1989 Discharge Type: Unspecified Discharge: Not Supplied Environment: Receiving Water: Milford Haven Status: Authorisation revokedRevoked Positional Accuracy: Located by supplier to within 10m</p>	B9SW (NW)	384	2	196760 203740
1	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: (B)Meyrick St Swo Pembroke Dock, (B)Meyrick St Swo Pembroke, Swo Pembroke Dock Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0209401 Permit Version: 2 Effective Date: 8th September 2010 Issued Date: 8th September 2010 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Milford Haven Status: Varied under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	B9SW (NW)	396	2	196770 203730
1	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: (B)Meyrick St Swo Pembroke Dock, (B)Meyrick St Swo Pembroke, Swo Pembroke Dock Authority: Natural Resources Wales Catchment Area: Not Given Reference: BP0209401 Permit Version: 1 Effective Date: 19th October 1989 Issued Date: 19th October 1989 Revocation Date: 7th September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Milford Haven Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m</p>	B9SW (NW)	396	2	196770 203730
2	<p>Discharge Consents</p> <p>Operator: Peter Hancock & Sons Ltd Property Type: Domestic Property (Single) Location: Building 130 Mr Hobbs Point Pier Rd, Mr Hobbs Point, Pier Road, Pembroke Dock Authority: Natural Resources Wales Catchment Area: Not Given Reference: Bn0096801 Permit Version: 1 Effective Date: 8th November 1973 Issued Date: 8th November 1973 Revocation Date: 31st October 1996 Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Milford Haven South Shore Status: Lapsed (under Environment Act 1995, Schedule 23) Positional Accuracy: Located by supplier to within 100m</p>	B9NW (NW)	485	2	196700 204200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Water St P'Broke Dk Swo Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0116201 Permit Version: 2 Effective Date: 8th September 2010 Issued Date: 8th September 2010 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Llanion Pill, Milford Haven Status: Varied under EPR 2010 Positional Accuracy: Located by supplier to within 10m</p>	B9SW (NW)	497	2	196880 203780
3	<p>Discharge Consents</p> <p>Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Water St P'Broke Dk Swo Authority: Natural Resources Wales Catchment Area: Not Given Reference: BP0116201 Permit Version: 1 Effective Date: 19th October 1989 Issued Date: 19th October 1989 Revocation Date: 7th September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge: Freshwater Stream/River Environment: Receiving Water: Llanion Pill, Milford Haven Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 100m</p>	B9SW (NW)	497	2	196880 203780
4	<p>Discharge Consents</p> <p>Operator: Pembrokeshire County Council Property Type: Domestic Property (Single) Location: Pier House Hobbs Point Pembroke Do, Hobbs Point Pembroke Dock Authority: Natural Resources Wales Catchment Area: Boundary Of HA 61 & HA 62 Reference: BH0071301 Permit Version: 1 Effective Date: 17th March 1967 Issued Date: 17th March 1967 Revocation Date: Not Supplied Discharge Type: Unspecified Discharge: Saline Estuary Environment: Receiving Water: Milford Haven Estuary Status: New Consent, by Application (Water Resources Act 1991, Section 88) Positional Accuracy: Located by supplier to within 10m</p>	B9SW (N)	527	2	196910 203890
5	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Adept Dry Cleaners Location: 57 Bush Street, Pembroke Dock, Pembrokeshire, Sa72 6an Authority: Pembrokeshire County Council, Environmental Health Department Permit Reference: EP/05/7.0(DC) Dated: 1st December 2006 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning Status: Permitted Positional Accuracy: Manually positioned to the address or location</p>	B5SW (SW)	456	3	196759 203339
6	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Asda Service Station Location: Criterion Way, Pembroke Dock, Pembrokeshire, Sa72 6da Authority: Pembrokeshire County Council, Environmental Health Department Permit Reference: EP29/1.2 Dated: 3rd March 2006 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station Status: Permitted Positional Accuracy: Manually positioned to the address or location</p>	B9SW (NW)	478	3	196864 203826

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Pioneer Filling Station Location: Maritime Industrial Estate, Pier Road, PEMBROKE DOCK, SA72 6DA Authority: Pembrokeshire County Council, Environmental Health Department Permit Reference: Not Given Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station Status: Authorised Positional Accuracy: Manually positioned within the geographical locality</p>	B9SW (N)	567	3	196951 203872
8	<p>Local Authority Pollution Prevention and Controls</p> <p>Name: Tesco Filling Station Location: Bierspool, London Road, PEMBROKE DOCK, Dyfed, SA72 6BP Authority: Pembrokeshire County Council, Environmental Health Department Permit Reference: EP/26/1.2(VR) 042428 Dated: 16th March 2006 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station Status: Permitted Positional Accuracy: Manually positioned to the address or location</p>	B6NW (E)	979	3	197334 203573
	<p>Nearest Surface Water Feature</p>	(NW)	185	-	196602 204089
9	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: Summerfield Stores, Diamond Street, PEMBROKE DOCK Authority: Environment Agency, Welsh Region Pollutant: Chemicals - Other Inorganic Note: Accident Incident Date: 25th June 1997 Incident Reference: 32743 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Spillage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	B5NW (W)	333	4	196700 203700
9	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: Summerfield Stores, Diamond St, PEMBROKE DOCK Authority: Environment Agency, Welsh Region Pollutant: Chemicals - Other Inorganic Note: Milford Haven; Spillage Incident Date: 25th June 1997 Incident Reference: 32743 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	B5NW (W)	333	4	196700 203695
10	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: Hobbs Point Walkway, Laugharne Holiday Park Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 2nd August 1996 Incident Reference: 29313 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	B9NW (NW)	481	4	196700 204195
10	<p>Pollution Incidents to Controlled Waters</p> <p>Property Type: Not Given Location: Hobbs Point Walkway, Leads Down To, Pontoon Authority: Environment Agency, Welsh Region Pollutant: Oils - Other Oil Note: Not Supplied Incident Date: 2nd August 1996 Incident Reference: 29313 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m</p>	B9NW (NW)	484	4	196705 204195

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	Substantiated Pollution Incident Register Authority: Natural Resources Wales Incident Date: 10th March 2004 Incident Reference: 222098 Water Impact: Category 4 - No Impact Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Inert : Construction / Demolition Material	B9SE (NE)	624	2	197006 203764
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 34 Pembroke Scale: 1:100,000	B5NW (NW)	0	4	196878 203697
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 34 Pembroke Scale: 1:100,000	B5NW (NW)	0	4	196947 203645
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	B5NW (NW)	0	1	196947 203645
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	B5NW (NW)	0	1	196917 203691
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	B5NW (NE)	0	2	196949 203647
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	B5NW (NE)	0	2	196949 203647
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
12	OS Water Network Lines Watercourse Form: Tidal river Watercourse Length: 12.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Not Supplied Primacy: 1	B9SW (NW)	346	5	196718 203959
13	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Milford Haven South and South Pembrok Primacy: 1	B9SW (NW)	358	5	196725 203963

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	Historical Landfill Sites Licence Holder: Not Supplied Location: Pembroke Dock Name: Bierspool Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD14344 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Deposited Waste included Inert, Industrial, Commercial, Household and Type: Special Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 6845/0004 BGS Ref: Not Supplied Other Ref: Not Supplied	B5NE (E)	946	2	197299 203565
	Local Authority Landfill Coverage Name: Pembrokeshire County Council - Has supplied landfill data		0	3	196947 203645
15	Local Authority Recorded Landfill Sites Location: Bierspool Tip, Pembroke Dock Reference: Not Supplied Authority: Pembrokeshire County Council, Environmental Health Department Last Reported Status: Closed Types of Waste: Not Supplied Date of Closure: Not Supplied Positional Accuracy: Positioned by the supplier Boundary Quality: Moderate	B6NW (E)	986	3	197341 203575
16	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	B5SE (SE)	925	-	197229 203301
17	Potentially Infilled Land (Non-Water) Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	B6NW (E)	980	-	197329 203541
18	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1869	B5NW (W)	225	-	196774 203669
19	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	B5NW (NW)	343	-	196893 203691
20	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1869	B9SW (N)	392	-	196880 203830
21	Registered Landfill Sites Licence Holder: Govan Davis Developments Ltd Licence Reference: WDL/3/85 Site Location: Dry Dock & Part Of West Llanion Pill, Pembroke Dock, Pembrokeshire Licence Easting: 196650 Licence Northing: 203730 Operator Location: Sunderland House, The Dockyard, Pembroke Dock, Pembrokeshire Authority: Environment Agency Wales, South West Area Site Category: Landfill Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st October 1986 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Stone, Brick, Hardcore, Concrete Prohibited Waste: Hazardous Wastes Liquid Wastes Metal Paper Plastics Toxic/Poisonous Wastes Wood	B5NW (W)	178	4	196746 203702

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	<p>Registered Landfill Sites</p> <p>Licence Holder: Govan Davies Dvlts. Ltd Licence Reference: WDL/2/83 Site Location: Old Dry Dock & Pill, Lower Meyrick Street, Pembroke Dock, Pembrokeshire Licence Easting: 196700 Licence Northing: 203680 Operator Location: Sunderland House, The Dockyard, Pembroke Dock, Pembrokeshire Authority: Environment Agency Wales, South West Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st May 1983 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Excavated Natural Materials \$ Hardcore And Rubble Prohibited Waste: Hazardous Wastes Liquid Wastes Metal Scrap Plastic/Polythene (Including Sacks) Poisonous, Noxious, Polluting Wastes Toxic/Poisonous Wastes Wood Waste/Timber</p>	B5NW (W)	336	4	196700 203680

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Dinantian Rocks (Undifferentiated)	B5NW (NW)	0	1	196947 203645
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	B5NW (NW)	0	1	196947 203645
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: no data Cadmium Concentration: <1.8 mg/kg Chromium Concentration: no data Lead Concentration: <100 mg/kg Nickel Concentration: no data	B9NW (NW)	9	1	196728 204127
23	BGS Recorded Mineral Sites Site Name: County Intermediate School Location: Pembroke, Pembroke Dock, Pembrokeshire Source: British Geological Survey, National Geoscience Information Service Reference: 90736 Type: Opencast Status: Ceased Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pembroke Limestone Group Commodity: Limestone Positional Accuracy: Located by supplier to within 10m	B5SE (SE)	927	1	197230 203295
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Natural Cavities Easting: 197300 Northing: 203600 Distance: 941 Quadrant Reference: B5 Quadrant Reference: NE Bearing Ref: E Cavity Type: Solution Pipe Solid Geology Detail: Carboniferous Limestone Supergroup, Upper Carboniferous Limestone Superficial Geology No Details Detail:	B5NE (E)	941	6	197300 203600
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	B5NW (NW)	0	1	196947 203645
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NW (NW)	0	1	196917 203691
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NW (NW)	0	1	196947 203645
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B5NW (NW)	0	1	196917 203691

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NW (NW)	0	1	196947 203645
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B5NW (S)	0	1	196958 203568
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NW (NW)	0	1	196947 203645
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SE (N)	27	1	197002 203817
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5SW (S)	46	1	196845 203118
	Potential for Ground Dissolution Stability Hazards Hazard Potential: High Source: British Geological Survey, National Geoscience Information Service	B5SW (S)	82	1	196874 203194
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NW (NW)	0	1	196947 203645
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B5SW (S)	91	1	196845 203118
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NW (NW)	0	1	196947 203645
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B5NW (NW)	0	1	196917 203691
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5SW (S)	0	1	196845 203118
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B5NW (NW)	0	1	196917 203691
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B5NW (NW)	0	1	196947 203645
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Higher probability radon area (10 to 30% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	B5NW (NW)	0	1	196947 203645
	Radon Potential - Radon Protection Measures Protection Measure: Full radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	B5NW (NW)	0	1	196947 203645

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	<p>Contemporary Trade Directory Entries</p> <p>Name: Bliss Cleaning Location: Maisonette, 40, Queen Street, Pembroke Dock, Dyfed, SA72 6JE Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B5NW (W)	336	-	196676 203550
24	<p>Contemporary Trade Directory Entries</p> <p>Name: Carpet & Upholstery Cleaning Location: 46, Queen Street, Pembroke Dock, SA72 6JE Classification: Carpet, Curtain & Upholstery Cleaners Status: Active Positional Accuracy: Automatically positioned to the address</p>	B5NW (W)	355	-	196695 203549
25	<p>Contemporary Trade Directory Entries</p> <p>Name: Modern Print Location: Meyrick Street, Pembroke Dock, Dyfed, SA72 6JD Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B5NW (W)	365	-	196715 203604
26	<p>Contemporary Trade Directory Entries</p> <p>Name: Jewson Ltd Location: 4, Meyrick Street, Pembroke Dock, Dyfed, SA72 6UT Classification: Builders' Merchants Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B5NW (SW)	369	-	196699 203492
27	<p>Contemporary Trade Directory Entries</p> <p>Name: Kate Clarkson Location: Unit A10, Maritime Industrial Park, Criterion Way, Pembroke Dock, Dyfed, SA72 6UL Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B9SW (NW)	432	-	196781 204006
27	<p>Contemporary Trade Directory Entries</p> <p>Name: E R C Engineering Location: Unit B4, Maritime Ind Pk, Criterion Way, Pembroke Dock, Dyfed, SA72 6UL Classification: Engineering Machine Services Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	B9SW (NW)	438	-	196793 203992
27	<p>Contemporary Trade Directory Entries</p> <p>Name: Slipscreens Ltd Location: Unit B2, Maritime Industrial Park, Criterion Way, Pembroke Dock, Dyfed, SA72 6UL Classification: Cycle Accessories, Manufacturers & Wholesalers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B9SW (N)	454	-	196796 204025
27	<p>Contemporary Trade Directory Entries</p> <p>Name: Horizon Blinds Location: Maritime Industrial Park, Criterion Way, Pembroke Dock, Dyfed, SA72 6UL Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B9SW (N)	470	-	196821 204008
28	<p>Contemporary Trade Directory Entries</p> <p>Name: Pembroke Dock Location: 13-15, Dimond Street, Pembroke Dock, Dyfed, SA72 6JA Classification: Hardware Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B5NW (SW)	444	-	196788 203564
28	<p>Contemporary Trade Directory Entries</p> <p>Name: Get Connected Uk Ltd Location: 16, Dimond Street, Pembroke Dock, SA72 6AH Classification: Mobile Phone Accessories and Car Kits Status: Active Positional Accuracy: Automatically positioned to the address</p>	B5NW (SW)	444	-	196783 203535
29	<p>Contemporary Trade Directory Entries</p> <p>Name: Computer Direct Location: 14, Haven Workshops, Pier Road, Pembroke Dock, Dyfed, SA72 6TR Classification: Computer Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B9NW (NW)	446	-	196751 204087

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	<p>Contemporary Trade Directory Entries</p> <p>Name: Pembrokehire Stained Glass Ltd Location: Unit 11-12, Haven Workshops, Pier Road, Pembroke Dock, SA72 6TR Classification: Stained Glass Designers & Producers Status: Active Positional Accuracy: Automatically positioned to the address</p>	B9NW (NW)	446	-	196751 204087
29	<p>Contemporary Trade Directory Entries</p> <p>Name: A & C John Location: Unit 12, Haven Workshops, Pier Road, Pembroke Dock, Dyfed, SA72 6TR Classification: Road Haulage Services Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B9NW (NW)	446	-	196751 204087
30	<p>Contemporary Trade Directory Entries</p> <p>Name: Window Fitters Centre Location: UNIT 22, Pembroke Dock, Dyfed, SA72 4DS Classification: Window Frames - Sales & Service Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	B5SW (SW)	449	-	196722 203214
31	<p>Contemporary Trade Directory Entries</p> <p>Name: Adept Dry Cleaners Location: 57, Bush Street, Pembroke Dock, Dyfed, SA72 6AN Classification: Dry Cleaners Status: Active Positional Accuracy: Automatically positioned to the address</p>	B5SW (SW)	455	-	196759 203339
31	<p>Contemporary Trade Directory Entries</p> <p>Name: Treen Box Location: 61, Bush Street, Pembroke Dock, Dyfed, SA72 6AN Classification: Antiques - Repairing & Restoring Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B5SW (SW)	471	-	196775 203342
32	<p>Contemporary Trade Directory Entries</p> <p>Name: B O C Gases Ltd Location: Maritime Industrial Park, Criterion Way, Pembroke Dock, Dyfed, SA72 6UL Classification: Gas Suppliers Status: Active Positional Accuracy: Automatically positioned to the address</p>	B9SW (N)	460	-	196830 203951
32	<p>Contemporary Trade Directory Entries</p> <p>Name: Kevin Rees Location: Unit B3, Maritime Ind Pk, Criterion Way, Pembroke Dock, Dyfed, SA72 6UL Classification: Wrought Ironwork Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	B9SW (N)	460	-	196830 203951
32	<p>Contemporary Trade Directory Entries</p> <p>Name: Pembrokehire Cast Stone Location: Unit C2, Maritime Industrial Park, Criterion Way, Pembroke Dock, Dyfed, SA72 6UL Classification: Stone Products - Manufacturers Status: Active Positional Accuracy: Automatically positioned to the address</p>	B9SW (N)	473	-	196832 203989
32	<p>Contemporary Trade Directory Entries</p> <p>Name: Criterion Motor Repairs Location: Maritime Industrial Park, Criterion Way, Pembroke Dock, SA72 6UL Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	B9SW (N)	481	-	196855 203940
33	<p>Contemporary Trade Directory Entries</p> <p>Name: Asda Petrol Location: Gordon Street, Pembroke Dock, Dyfed, SA72 6DA Classification: Petrol Filling Stations Status: Active Positional Accuracy: Automatically positioned to the address</p>	B5NW (NW)	469	-	196841 203709
34	<p>Contemporary Trade Directory Entries</p> <p>Name: H L Fielding & Sons Ltd Location: Unit 1, Haven Workshops, Pier Road, PEMBROKE DOCK, Dyfed, SA72 6TR Classification: Electrical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B9NW (N)	483	-	196803 204073

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
35	<p>Contemporary Trade Directory Entries</p> <p>Name: Just Wood Location: Unit 4, Haven Workshops, Pier Road, Pembroke Dock, Dyfed, SA72 6TR Classification: Furniture Manufacturers - Home & Office Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B9SW (N)	496	-	196835 204041
35	<p>Contemporary Trade Directory Entries</p> <p>Name: Pier Engineering Location: Unit 7, Haven Workshops, Pier Road, Pembroke Dock, SA72 6TR Classification: Mechanical Engineers Status: Active Positional Accuracy: Automatically positioned to the address</p>	B9SW (N)	509	-	196862 204013
35	<p>Contemporary Trade Directory Entries</p> <p>Name: Millforge Ltd Location: 1, Stockwell Road, Pembroke Dock, SA72 6TQ Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	B9NW (N)	516	-	196854 204049
36	<p>Contemporary Trade Directory Entries</p> <p>Name: Heritage Preservations Location: 3, Lewis Street, Pembroke Dock, Dyfed, SA72 6DD Classification: Damp & Dry Rot Control Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B5NW (SW)	505	-	196835 203485
37	<p>Contemporary Trade Directory Entries</p> <p>Name: Pembroke Wash Vac Centre Location: 66, Bush Street, Pembroke Dock, Dyfed, SA72 6DE Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B5SW (S)	558	-	196854 203291
38	<p>Contemporary Trade Directory Entries</p> <p>Name: Alliance Lifting Services Ltd Location: Unit 95, Stockwell Road, Pembroke Dock, Dyfed, SA72 6TQ Classification: Lifting Equipment Status: Active Positional Accuracy: Automatically positioned to the address</p>	B9SW (N)	562	-	196905 204045
38	<p>Contemporary Trade Directory Entries</p> <p>Name: A J Garage Location: Sunderland House, Stockwell Road, Pembroke Dock, Dyfed, SA72 6TQ Classification: Garage Services Status: Inactive Positional Accuracy: Automatically positioned in the proximity of the address</p>	B9SW (N)	564	-	196908 204044
38	<p>Contemporary Trade Directory Entries</p> <p>Name: Busby Holdings Ltd Location: Unit 3, Llannion Park Industrial Estate, Richmond Road, Pembroke Dock, Dyfed, SA72 6TZ Classification: Mechanical Engineers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B9SW (N)	583	-	196932 204036
39	<p>Contemporary Trade Directory Entries</p> <p>Name: Park Leisure Uk Location: 39, Dimond Street, Pembroke Dock, Dyfed, SA72 6BT Classification: Caravan Dealers & Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B5NW (S)	567	-	196910 203543
40	<p>Contemporary Trade Directory Entries</p> <p>Name: Mr Roberts Location: 19, Laws Street, Pembroke Dock, SA72 6DJ Classification: Clothing & Fabrics - Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B5NW (S)	588	-	196915 203459
41	<p>Contemporary Trade Directory Entries</p> <p>Name: Wilkinson Hardware Stores Ltd Location: Pier Road, Pembroke Dock, SA72 6TR Classification: Hardware Status: Active Positional Accuracy: Automatically positioned to the address</p>	B9SE (N)	607	-	196985 203927

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	<p>Contemporary Trade Directory Entries</p> <p>Name: A1 Scrubbers Location: 6, London Road, Pembroke Dock, Dyfed, SA72 6DU Classification: Cleaning Services - Domestic Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B9SE (NE)	646	-	197030 203781
42	<p>Contemporary Trade Directory Entries</p> <p>Name: Quiet Revolutions Manufacturing Location: 13, London Road, Pembroke Dock, Dyfed, SA72 6DS Classification: Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B9SE (NE)	652	-	197031 203739
43	<p>Contemporary Trade Directory Entries</p> <p>Name: Paul'S Appliance Repairs Location: 102, Gwyther Street, Pembroke Dock, Dyfed, SA72 6HD Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Active Positional Accuracy: Automatically positioned to the address</p>	B5SW (S)	655	-	196908 203125
44	<p>Contemporary Trade Directory Entries</p> <p>Name: R S T Pembroke Ltd Location: Pembroke Dock, SA72 6TZ Classification: Garage Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	B9NE (N)	671	-	196991 204120
44	<p>Contemporary Trade Directory Entries</p> <p>Name: Kitbar Equipment Wales Location: Unit 3, Llannion Park Industrial Estate, Richmond Road, Pembroke Dock, Dyfed, SA72 6TZ Classification: Catering Equipment Status: Active Positional Accuracy: Automatically positioned to the address</p>	B9NE (N)	671	-	196998 204107
44	<p>Contemporary Trade Directory Entries</p> <p>Name: Gb Nametapes Location: Unit 4, Llannion Pk Ind Est, Richmond Rd, Pembroke Dock, Dyfed, SA72 6TZ Classification: Textile Manufacturing Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	B9NE (N)	677	-	197006 204103
44	<p>Contemporary Trade Directory Entries</p> <p>Name: P F F Machinery Location: Unit 4, Llannion Pk Ind Est, Richmond Rd, Pembroke Dock, Dyfed, SA72 6TZ Classification: Plant & Machinery Repairs Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	B9NE (N)	678	-	197006 204104
44	<p>Contemporary Trade Directory Entries</p> <p>Name: G A C Shipping Uk Ltd Location: Osprey House, Richmond Road, Pembroke Dock, SA72 6TS Classification: Freight Forwarders Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B9NE (N)	723	-	197039 204140
45	<p>Contemporary Trade Directory Entries</p> <p>Name: 1st Choice Finesse Blinds Location: Unit 13, Llannion Pk Ind Est, Richmond Rd, Pembroke Dock, Dyfed, SA72 6TZ Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Manually positioned to the address or location</p>	B9NE (N)	705	-	197056 204050
45	<p>Contemporary Trade Directory Entries</p> <p>Name: Finesse Blinds Location: Unit 13, Llannion Pk Ind Est, Richmond Rd, Pembroke Dock, Dyfed, SA72 6TZ Classification: Blinds, Awnings & Canopies Status: Inactive Positional Accuracy: Manually positioned within the geographical locality</p>	B9SE (N)	705	-	197061 204033
45	<p>Contemporary Trade Directory Entries</p> <p>Name: Inspectorate International Ltd Location: Inspectorate House, Llannion Park Industrial Estate, Richmond Road, Pembroke Dock, Dyfed, SA72 6TZ Classification: Cargo Handling Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	B9NE (N)	728	-	197054 204119

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
45	<p>Contemporary Trade Directory Entries</p> <p>Name: Andrew Milward Joinery Location: Unit 22 Richmond Road, Llannion Park Industrial Estate, Pembroke Dock, Dyfed, SA72 6TZ Classification: Joinery Manufacturers Status: Active Positional Accuracy: Manually positioned to the address or location</p>	B9NE (N)	728	-	197068 204086
45	<p>Contemporary Trade Directory Entries</p> <p>Name: Maguire Pumps Ltd Location: Unit 21, Llannion Park Industrial Estate, Richmond Road, Pembroke Dock, Dyfed, SA72 6TZ Classification: Pumps - Sales, Servicing & Repairs Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B9NE (N)	732	-	197076 204075
46	<p>Contemporary Trade Directory Entries</p> <p>Name: T Car Sales Location: London Road, Pembroke Dock, Dyfed, SA72 6DS Classification: Car Dealers Status: Active Positional Accuracy: Manually positioned to the road within the address or location</p>	B5NE (E)	787	-	197158 203679
47	<p>Contemporary Trade Directory Entries</p> <p>Name: Bierspool Autofill Location: London Rd, Pembroke Dock, Dyfed, SA72 6DT Classification: Petrol Filling Stations - 24 Hour Status: Inactive Positional Accuracy: Manually positioned to the road within the address or location</p>	B5NE (E)	842	-	197211 203664
48	<p>Contemporary Trade Directory Entries</p> <p>Name: Tesco Petrol Filling Station Location: Bierspool, London Road, Pembroke Dock, Dyfed, SA72 6BP Classification: Petrol Filling Stations - 24 Hour Status: Inactive Positional Accuracy: Automatically positioned to the address</p>	B5NE (E)	916	-	197267 203558
49	<p>Contemporary Trade Directory Entries</p> <p>Name: Angela'S Cleaning Services Location: 15, Essex Road, Pembroke Dock, Dyfed, SA72 6ED Classification: Commercial Cleaning Services Status: Active Positional Accuracy: Automatically positioned to the address</p>	B9NE (NE)	974	-	197273 204234
50	<p>Fuel Station Entries</p> <p>Name: Asda Pembroke Dock Location: Western Way, Pembroke Dock, Pembrokeshire, SA72 6DA Brand: Asda Premises Type: Hypermarket Status: Open Positional Accuracy: Manually positioned to the address or location</p>	B9SW (NW)	479	-	196865 203824
51	<p>Fuel Station Entries</p> <p>Name: Tesco Pembroke Dock Location: London Road, Pembroke Dock, Pembrokeshire, SA72 6DS Brand: TESCO Premises Type: Hypermarket Status: Open Positional Accuracy: Manually positioned to the address or location</p>	B6NW (E)	981	-	197336 203573
52	<p>Points of Interest - Commercial Services</p> <p>Name: K Rees Location: Unit A8 Maritime Industrial Park, Criterion Way, Pembroke Dock, SA72 6UL Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location</p>	B9SW (NW)	431	7	196776 204014
52	<p>Points of Interest - Commercial Services</p> <p>Name: A & C John Location: Unit 12 Haven Workshops, Pier Road, Pembroke Dock, SA72 6TR Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location</p>	B9NW (NW)	446	7	196751 204087
52	<p>Points of Interest - Commercial Services</p> <p>Name: Denholm Barwil Location: Ground Floor Room G7 Pier House, Pier Road, Pembroke Dock, SA72 6TR Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location</p>	B9NW (NW)	466	7	196747 204126

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
53	Points of Interest - Commercial Services Name: Kevin Rees Location: Maritime Industrial Park, Criterion Way, Pembroke Dock, SA72 6UL Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	B9SW (N)	470	7	196821 204008
53	Points of Interest - Commercial Services Name: Criterion Motor Repairs Location: Maritime Industrial Park, Criterion Way, Pembroke Dock, SA72 6UL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B9SW (N)	474	7	196848 203935
53	Points of Interest - Commercial Services Name: Haven Car Valeting Location: Unit C1 Maritime Industrial Park, Criterion Way, Pembroke Dock, SA72 6UL Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	B9SW (N)	483	7	196840 203995
53	Points of Interest - Commercial Services Name: Haven Car Valeting Location: Unit C1 Maritime Industrial Park, Criterion Way, Pembroke Dock, SA72 6UL Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	B9SW (N)	483	7	196840 203995
53	Points of Interest - Commercial Services Name: Criterion Motor Repairs Location: Maritime Industrial Park, Criterion Way, Pembroke Dock, SA72 6UL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B9SW (N)	483	7	196856 203942
53	Points of Interest - Commercial Services Name: Haven Car Valeting Location: Unit C1 Maritime Industrial Park, Criterion Way, Pembroke Dock, SA72 6UL Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	B9SW (N)	483	7	196840 203995
54	Points of Interest - Commercial Services Name: Asda Pembroke Dock Location: Western, Way, Pembroke Dock, Pembrokeshire, SA72 6DA Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	B9SW (NW)	479	7	196865 203824
54	Points of Interest - Commercial Services Name: Car Wash Location: Western Way, Pembroke Dock, Pembrokeshire, SA72 6DA Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	B9SW (NW)	479	7	196865 203824
55	Points of Interest - Commercial Services Name: Millforge Ltd Location: Stockwell Road, Pembroke Dock, SA72 6TQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B9SW (N)	615	7	196965 204038
55	Points of Interest - Commercial Services Name: Millforge Ltd Location: Stockwell Road, Pembroke Dock, SA72 6TQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B9SW (N)	615	7	196965 204038
55	Points of Interest - Commercial Services Name: R S T Pembroke Ltd Location: Unit 6 Llannion Park Industrial Estate, Richmond Road, Pembroke Dock, SA72 6TZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B9NE (N)	678	7	197013 204088

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
55	<p>Points of Interest - Commercial Services</p> <p>Name: Autoglass Location: Unit 6 Llannion Park Industrial Estate, Richmond Road, Pembroke Dock, SA72 6TZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location</p>	B9NE (N)	679	7	197014 204088
55	<p>Points of Interest - Commercial Services</p> <p>Name: R S T Pembroke Ltd Location: Unit 6 Llannion Park Industrial Estate, Richmond Road, Pembroke Dock, SA72 6TZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location</p>	B9NE (N)	679	7	197014 204088
56	<p>Points of Interest - Commercial Services</p> <p>Name: Llanion Garage Location: Unit 17 West Llanion Centre Llannion Park Industrial Estate, Richmond Road, Pembroke Dock, SA72 6TZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location</p>	B9SE (N)	705	7	197061 204033
57	<p>Points of Interest - Commercial Services</p> <p>Name: G A C Services UK Ltd Location: Osprey House, Richmond Road, Pembroke Dock, SA72 6TS Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location</p>	B9NE (N)	721	7	197038 204139
57	<p>Points of Interest - Commercial Services</p> <p>Name: Inspectorate International Ltd Location: Inspectorate House Llannion Park Industrial Estate, Richmond Road, Pembroke Dock, SA72 6TZ Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location</p>	B9NE (N)	727	7	197054 204118
58	<p>Points of Interest - Commercial Services</p> <p>Name: Tesco Pembroke Dock Location: London, Road, Pembroke Dock, Pembrokeshire, SA72 6DS Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location</p>	B6NW (E)	981	7	197336 203573
58	<p>Points of Interest - Commercial Services</p> <p>Name: Car Wash Location: London Road, Pembroke Dock, Pembrokeshire, SA72 6DS Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location</p>	B6NW (E)	981	7	197336 203573
59	<p>Points of Interest - Manufacturing and Production</p> <p>Name: Tank Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location</p>	B9NW (NW)	408	7	196670 204123
59	<p>Points of Interest - Manufacturing and Production</p> <p>Name: Tanks Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location</p>	B9NW (NW)	413	7	196680 204121
60	<p>Points of Interest - Manufacturing and Production</p> <p>Name: Maritime Industrial Park Location: SA72 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location</p>	B9SW (N)	452	7	196808 203992
60	<p>Points of Interest - Manufacturing and Production</p> <p>Name: Haven Workshops Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location</p>	B9SW (N)	503	7	196842 204043

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
60	Points of Interest - Manufacturing and Production Name: Haven Workshops Location: SA72 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B9SW (N)	503	7	196842 204042
61	Points of Interest - Manufacturing and Production Name: West Llanion Park Industrial Estate Location: SA72 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	B9NE (N)	710	7	197057 204064
62	Points of Interest - Manufacturing and Production Name: Tanks Location: SA72 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	B5NE (SE)	735	7	197088 203584
63	Points of Interest - Public Infrastructure Name: Outfall Location: SA72 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	B9SW (NW)	325	7	196701 203749
64	Points of Interest - Public Infrastructure Name: Asda Petrol Location: Gordon, Street, Pembroke Dock, SA72 6DA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B9SW (NW)	479	7	196865 203826
64	Points of Interest - Public Infrastructure Name: Asda Pembroke Dock Location: Western Way, Pembroke Dock, Pembrokeshire, SA72 6DA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B9SW (NW)	479	7	196865 203824
65	Points of Interest - Public Infrastructure Name: Dyfed-Powys Constabulary Location: Pembroke Dock Police Station 4, Water Street, Pembroke Dock, SA72 6DW Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	B5NW (NE)	600	7	196970 203689
65	Points of Interest - Public Infrastructure Name: Pembroke Dock Police Station Location: 4 Water Street, Pembroke Dock, SA72 6DW Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	B5NW (NE)	600	7	196970 203688
66	Points of Interest - Public Infrastructure Name: Pembroke Dock Rail Station Location: SA72 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	B5NE (SE)	691	7	197035 203540
66	Points of Interest - Public Infrastructure Name: Pembroke Dock Station Location: Apley Terrace, SA72 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	B5NE (SE)	691	7	197035 203540
67	Points of Interest - Public Infrastructure Name: Pembroke Dock Fire Station Location: High Street, Pembroke Dock, SA72 6NU Category: Central and Local Government Class Code: Fire Brigade Stations Positional Accuracy: Positioned to address or location	B1NW (S)	701	7	196806 202886
68	Points of Interest - Public Infrastructure Name: Tesco Petrol Filling Station Location: Bierspool, London Road, Pembroke Dock, SA72 6BP Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B5NE (E)	916	7	197267 203558

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
68	Points of Interest - Public Infrastructure Name: Tesco Filling Station Location: London Road, Pembroke Dock, SA72 6DT Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B6NW (E)	979	7	197334 203572
68	Points of Interest - Public Infrastructure Name: Tesco Pembroke Dock Location: London, Road, Pembroke Dock, Pembrokeshire, SA72 6DS Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B6NW (E)	981	7	197336 203573
69	Points of Interest - Public Infrastructure Name: Cemetery (Military) Location: SA72 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	B10SW (NE)	990	7	197375 203869
69	Points of Interest - Public Infrastructure Name: Cemetery (Military) Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	B10SW (NE)	991	7	197376 203868
70	Points of Interest - Recreational and Environmental Name: Playground Location: Criterion Way, SA72 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	B9SW (NW)	406	7	196792 203844
70	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B9SW (NW)	407	7	196793 203845
71	Points of Interest - Recreational and Environmental Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B5SE (S)	837	7	197117 203182
71	Points of Interest - Recreational and Environmental Name: Play Area Location: Nr Bush Street, SA72 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B5SE (S)	837	7	197117 203182
72	Points of Interest - Recreational and Environmental Name: Playground Location: SA72 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B1NW (S)	848	7	196906 202778
72	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B1NW (S)	853	7	196913 202778
73	Points of Interest - Recreational and Environmental Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B5SE (SE)	916	7	197223 203318
73	Points of Interest - Recreational and Environmental Name: Playground Location: Trinity Road, SA72 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B5SE (SE)	916	7	197223 203318

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
74	<p>Points of Interest - Recreational and Environmental</p> <p>Name: Playground Location: Charles Thomas Avenue, SA72 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location</p>	B5NE (E)	927	7	197297 203659

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
75	<p>Environmentally Sensitive Areas</p> <p>Name: Preseli (decommissioned) Multiple Areas: Y Total Area (m2): 1187932672 Source: The National Assembly for Wales, GI Services (Department of Planning & Countryside)</p>	B13NW (N)	895	8	196670 204779
76	<p>Sites of Special Scientific Interest</p> <p>Name: Milford Haven Waterway Multiple Areas: Y Total Area (m2): 21920694.53 Source: Natural Resources Wales Reference: 28232wp3 Designation Details: Mixed Biological And Geological Designation Date: 4th March 1993 Date Type: Notified</p>	(W)	0	2	195712 204040
77	<p>Special Areas of Conservation</p> <p>Name: Pembrokeshire Marine / Sir Benfro Forol Multiple Areas: Y Total Area (m2): 1380663657.58 Source: Natural Resources Wales Reference: UK0013116 Status: Designated</p>	B9NW (N)	0	2	196910 204157













Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Pembrokeshire County Council - Public Protection Division	December 2015	Annual Rolling Update
Discharge Consents Environment Agency - Welsh Region Natural Resources Wales	August 2014 August 2017	Quarterly Quarterly
Enforcement and Prohibition Notices Environment Agency - Welsh Region	March 2013	As notified
Integrated Pollution Controls Environment Agency - Welsh Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control Environment Agency - Welsh Region Natural Resources Wales	October 2017 October 2017	Quarterly Quarterly
Local Authority Integrated Pollution Prevention And Control Pembrokeshire County Council - Environmental Health Department	December 2015	Annual Rolling Update
Local Authority Pollution Prevention and Controls Pembrokeshire County Council - Environmental Health Department	November 2015	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Pembrokeshire County Council - Environmental Health Department	December 2015	Annual Rolling Update
Nearest Surface Water Feature Ordnance Survey	September 2017	
Pollution Incidents to Controlled Waters Environment Agency - Welsh Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - Welsh Region Natural Resources Wales	March 2013 March 2013	As notified As notified
Prosecutions Relating to Controlled Waters Environment Agency - Welsh Region Natural Resources Wales	March 2013 March 2013	As notified As notified
Registered Radioactive Substances Natural Resources Wales Environment Agency - Welsh Region	January 2015 January 2015	As notified
Substantiated Pollution Incident Register Environment Agency Wales - South West Area Natural Resources Wales	October 2017 October 2017	Quarterly Quarterly
Water Abstractions Environment Agency - Welsh Region Natural Resources Wales	October 2017 October 2017	Quarterly Quarterly
Water Industry Act Referrals Environment Agency - Welsh Region Natural Resources Wales	October 2017 October 2017	Quarterly Quarterly
Groundwater Vulnerability Environment Agency - Head Office	April 2015	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Natural Resources Wales	November 2016	As notified
Extreme Flooding from Rivers or Sea without Defences Natural Resources Wales	November 2017	Quarterly

Agency & Hydrological	Version	Update Cycle
Flooding from Rivers or Sea without Defences Natural Resources Wales	November 2017	Quarterly
Areas Benefiting from Flood Defences Natural Resources Wales	November 2017	Quarterly
Flood Water Storage Areas Natural Resources Wales	November 2017	Quarterly
Flood Defences Natural Resources Wales	November 2017	Quarterly
OS Water Network Lines Ordnance Survey	October 2017	6 Weekly
Surface Water 1 in 30 year Flood Extent Natural Resources Wales	October 2013	As notified
Surface Water 1 in 100 year Flood Extent Natural Resources Wales	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent Natural Resources Wales	October 2013	As notified
Surface Water Suitability Natural Resources Wales	October 2013	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually
Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Natural Resources Wales	July 2017	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Welsh Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency Wales - South West Area Natural Resources Wales	October 2017 October 2017	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency Wales - South West Area Natural Resources Wales	October 2017 October 2017	Quarterly Quarterly
Local Authority Landfill Coverage Pembrokeshire County Council - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites Pembrokeshire County Council - Environmental Health Department	May 2000	Not Applicable
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites Environment Agency Wales - South West Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency Wales - South West Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency Wales - South West Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	September 2017	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Pembrokeshire Coast National Park Authority - Development Control Pembrokeshire County Council - Planning Department	February 2016 October 2015	Annual Rolling Update Annual Rolling Update
Planning Hazardous Substance Consents Pembrokeshire Coast National Park Authority - Development Control Pembrokeshire County Council - Planning Department	February 2016 October 2015	Annual Rolling Update Annual Rolling Update
Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2017	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	November 2017	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2017	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	December 2017	Quarterly
Points of Interest - Education and Health PointX	December 2017	Quarterly
Points of Interest - Manufacturing and Production PointX	December 2017	Quarterly
Points of Interest - Public Infrastructure PointX	December 2017	Quarterly
Points of Interest - Recreational and Environmental PointX	December 2017	Quarterly
Underground Electrical Cables National Grid	December 2015	Bi-Annually
Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural Resources Wales	October 2017	Bi-Annually
Areas of Outstanding Natural Beauty Natural Resources Wales	August 2017	Bi-Annually
Environmentally Sensitive Areas The National Assembly for Wales - GI Services (Department of Planning & Countryside)	January 2017	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Pembrokeshire County Council	August 2017	Bi-Annually
Marine Nature Reserves Natural Resources Wales	August 2017	Bi-Annually
National Nature Reserves Natural Resources Wales	August 2017	Bi-Annually
National Parks Natural Resources Wales	August 2017	Annually
Nitrate Vulnerable Zones Natural Resources Wales The National Assembly for Wales - GI Services (Department of Planning & Countryside)	July 2017 October 2005	Bi-Annually
Ramsar Sites Natural Resources Wales	August 2017	Bi-Annually
Sites of Special Scientific Interest Natural Resources Wales	August 2017	Bi-Annually
Special Areas of Conservation Natural Resources Wales	August 2017	Bi-Annually
Special Protection Areas Natural Resources Wales	August 2017	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Natural Resources Wales Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	Pembrokeshire County Council - Environmental Health Department Public Protection Division, Pembrokeshire County Council, County Hall, Haverfordwest, Pembrokeshire, SA61 1TP	Telephone: 01437 764551 Fax: 01437 775838 Website: www.pembrokeshire.gov.uk
4	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
5	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	Peter Brett Associates Caversham Bridge House, Waterman Place, Reading, Berkshire, RG1 8DN	Telephone: 0118 950 0761 Fax: 0118 959 7498 Email: reading@pba.co.uk Website: www.pba.co.uk
7	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
8	The National Assembly for Wales - GI Services (Department of Planning & Countryside) Yr Hen Ysgol Gymraeg, Alexandria Road, Aberystwyth, Ceredigion, SY23 1LD	Telephone: 02920 825111 Website: www.wales.gov.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Ordnance Survey Plan 1:10,000

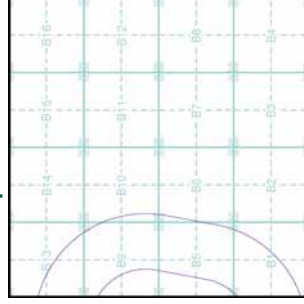
1:10,000 Raster Mapping



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Pembrokeshire	1:10,560	1869	3
Pembrokeshire	1:10,560	1909	4
Pembrokeshire	1:10,000	1950	5
Pembrokeshire	1:10,000	1953	6
Ordnance Survey Plan	1:10,000	1964	7
Ordnance Survey Plan	1:10,000	1966	8
Ordnance Survey Plan	1:10,000	1971 - 1975	9
Ordnance Survey Plan	1:10,000	1985	10
Ordnance Survey Plan	1:10,000	1993	11
10K Raster Mapping	1:10,000	2000	12
10K Raster Mapping	1:10,000	2006	13
VectorMap Local	1:10,000	2017	14

Historical Map - Slice B



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building, Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

	Government and Administrative Buildings		Military and Industrial Buildings
	Military and Communication Areas		Subway Entrance
	Fireproof Building		Prominent Fireproof Building
	Non-fireproof Building (non-dwelling)		Factory, mill, and flour mill, with chimneys
	Power Station, drawn to scale		Telephone Station, drawn to scale
	Abandoned Open-pit Mine or Quarry		Open-pit Salt Mine
	Oil Deposit or Well		Oil Seepage
	Fuel Storage Tanks		Natural Gas Tank
	Drill Hole		Burial Mound
	Bench Mark		Triangulation Point on Burial Mound
	Single-track Railroad		Double-track Railroad
	Tunnel		Pipe (Culvert)
	Coniferous Forest		Deciduous Forest
	Mixed Forest		Scattered Vegetation
	Lawns		Citrus Orchard
	Wet Ground		

243.8 Values for prominent elevations
 186.0 Numbers for spot elevations, depth soundings, contour lines, etc.
 0.2 Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	Ъ (-)
Д д (D)	Л л (L)	У у (U)	Ы (Y)
Е е (E)	М м (M)	Ф ф (F)	Ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

	Government and Administrative Buildings		Military and Industrial Buildings
	Military and Communication Areas		Subway Entrance
	Partly Demolished Buildings		Demolished Buildings
	Built-Up Area with Fireproof Buildings Predominant		Built-Up Area with Non-Fireproof Buildings Predominant
	Individual Fireproof Building		Prominent Industrial Building
	Individual Dwelling		Ruins of an Individual Dwelling
	Factory or Mill with Chimney		Mine or Open Pit Mine without Chimney
	Non-Operating Shaft or Mine		Salt Mine
	Stone Quarry		Fuel Storage or Service Station
	Small Hydroelectric Power Station		Transformer Station
	Burial Mound (height in metres)		Triangulation Point on Burial Mound
	Bench Mark (monumented)		Telegraph Office
	Radio Tower		Airfield or Seaplane Base
	Small Hydroelectric Power Station		Width of Road
	Telegraph/Telephone Lines		Steep Grade
	Main Highway		Improved Dirt Road (former truck road)
	Small Bridge		Dismantled Railroad
	Pipe (Culvert)		Railroad Under Construction
	Double-track Railroad with First Class Station		Water Gauge
	Shore Embankment		Direction and velocity of current
	Water Reservoir or Rain Water Pit		Water Level Mark
	Contour Line and Value		Isobath with value
	Heavy (Index) Contour Line		Spot Elevation Value
	Coniferous		Mixed
	Deciduous		Scrub

Key to Numbers on Mapping

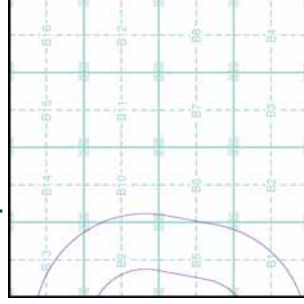
No.	Description
8	Factory (Gas)
11	Sawmill
12	Military Barracks
15	Radio Station

Mapping Type	Scale	Date	Pg
Pembrokeshire	1:10,560	1869	3
Pembrokeshire	1:10,560	1909	4
Pembrokeshire	1:10,000	1950	5
Pembrokeshire	1:10,560	1953	6
Ordnance Survey Plan	1:10,000	1964	7
Ordnance Survey Plan	1:10,000	1966	8
Ordnance Survey Plan	1:10,000	1971 - 1975	9
Ordnance Survey Plan	1:10,000	1985	10
Ordnance Survey Plan	1:10,000	1993	11
10K Raster Mapping	1:10,000	2000	12
10K Raster Mapping	1:10,000	2006	13
VectorMap Local	1:10,000	2017	14

Historical Mapping & Photography included:



Russian Map - Slice B



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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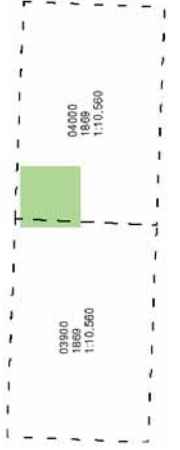


Pembrokeshire Published 1869

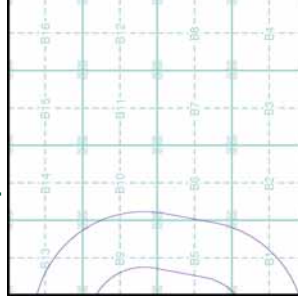
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey, which were adopted for England, Wales and Scotland in the 1840's. In 1864 the OS introduced a new series of maps, the 1:10,560 maps. These maps are used to update the 1:10,560 maps. The published date is the year these maps were first published, not the date of the survey. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in cutting areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping on a number of sources. The maps appear 'unfinished' - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

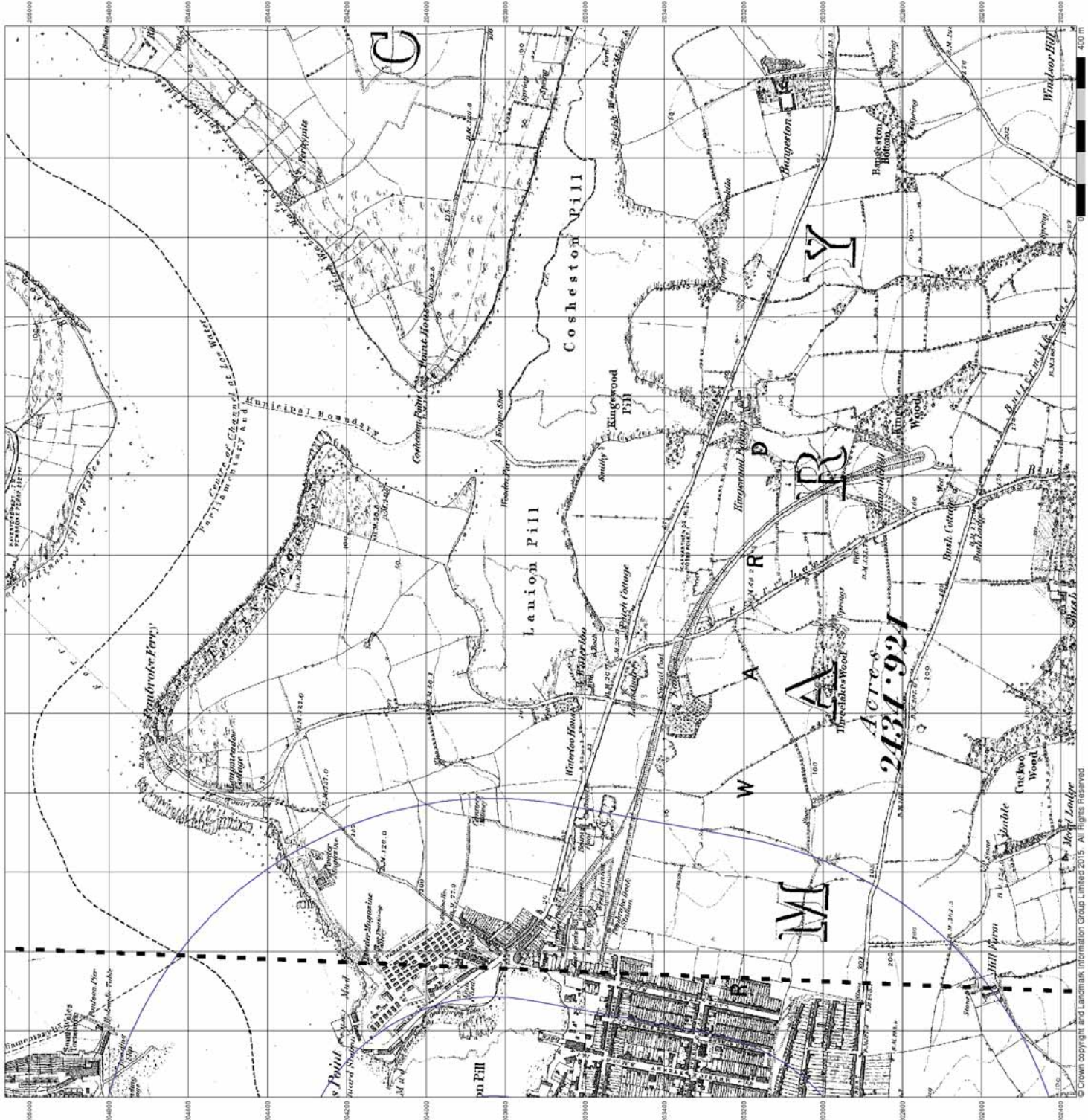
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 196950, 203650
Slice: B
Site Area (Ha): 36.27
Search Buffer (m): 1000

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Pembrokeshire Published 1909

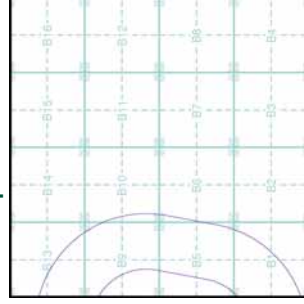
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at a 1:25,000 scale for England, Wales and Scotland in the 1840's. In 1854 the Ordnance Survey published the first 1:50,000 scale maps. These maps are used to update the 1:10,560 maps. The published data then thereafter are often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping on a number of sources. The maps appear 'unfinished' - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

OSBNE	1909
64NW	1909
1:10,560	1:10,560

Historical Map - Slice B



Order Details

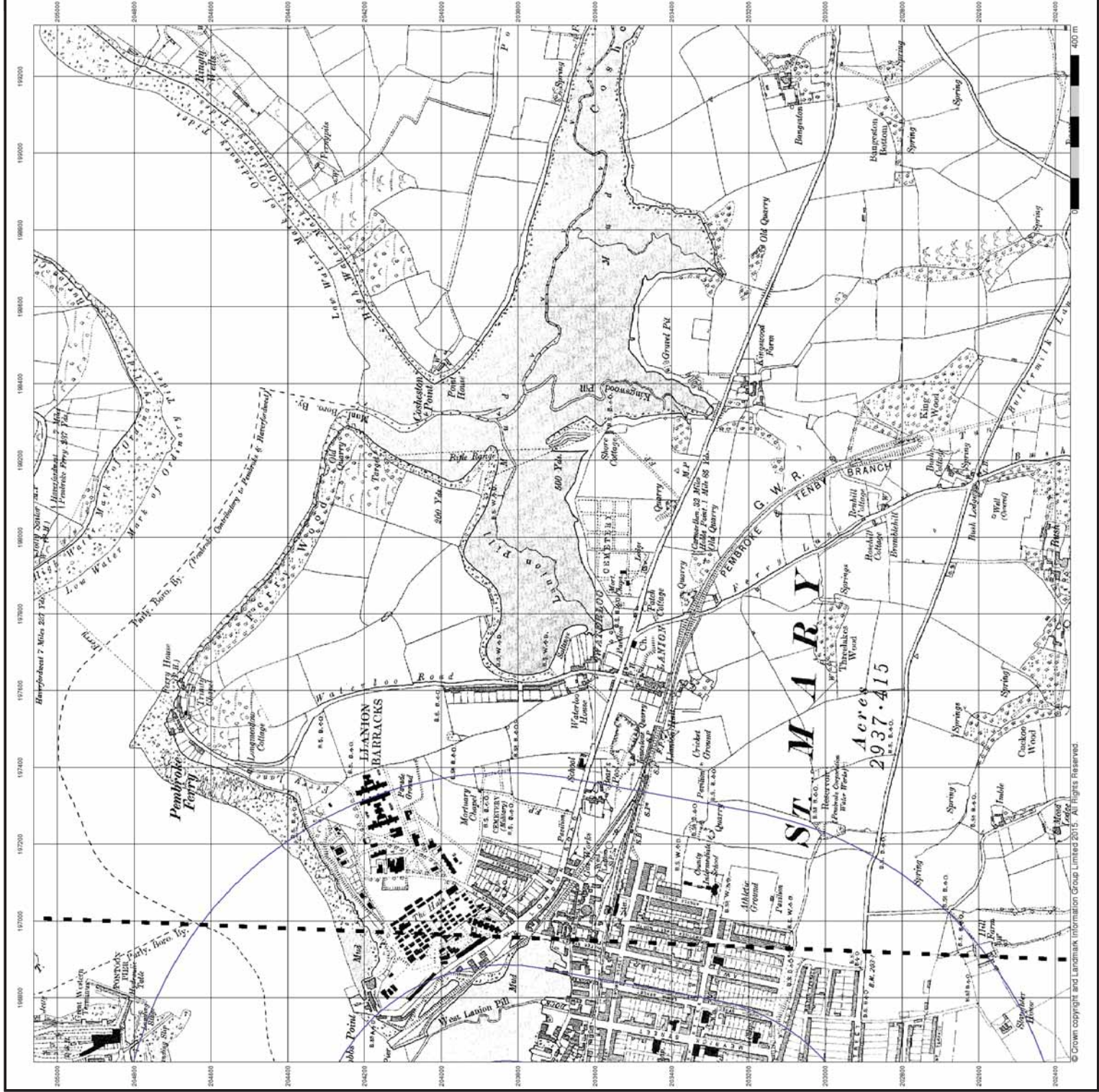
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

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Pembroke

Published 1950

Source map scale - 1:10,000

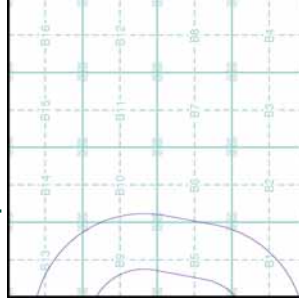
These maps were produced by the Russian military during the Cold War between 1950 and 1957, at a scale of 1:10,000. They cover the area around the site, with a grid system. The maps show the layout of the site, including buildings, roads, and other features. The maps are published in 1950 and are at a scale of 1:10,000. The maps show the layout of the site, including buildings, roads, and other features. The maps are published in 1950 and are at a scale of 1:10,000.

They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs. For use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)

- SM80NE
1950
1:10,000
- SM80SE
1950
1:10,000

Russian Map - Slice B



Order Details

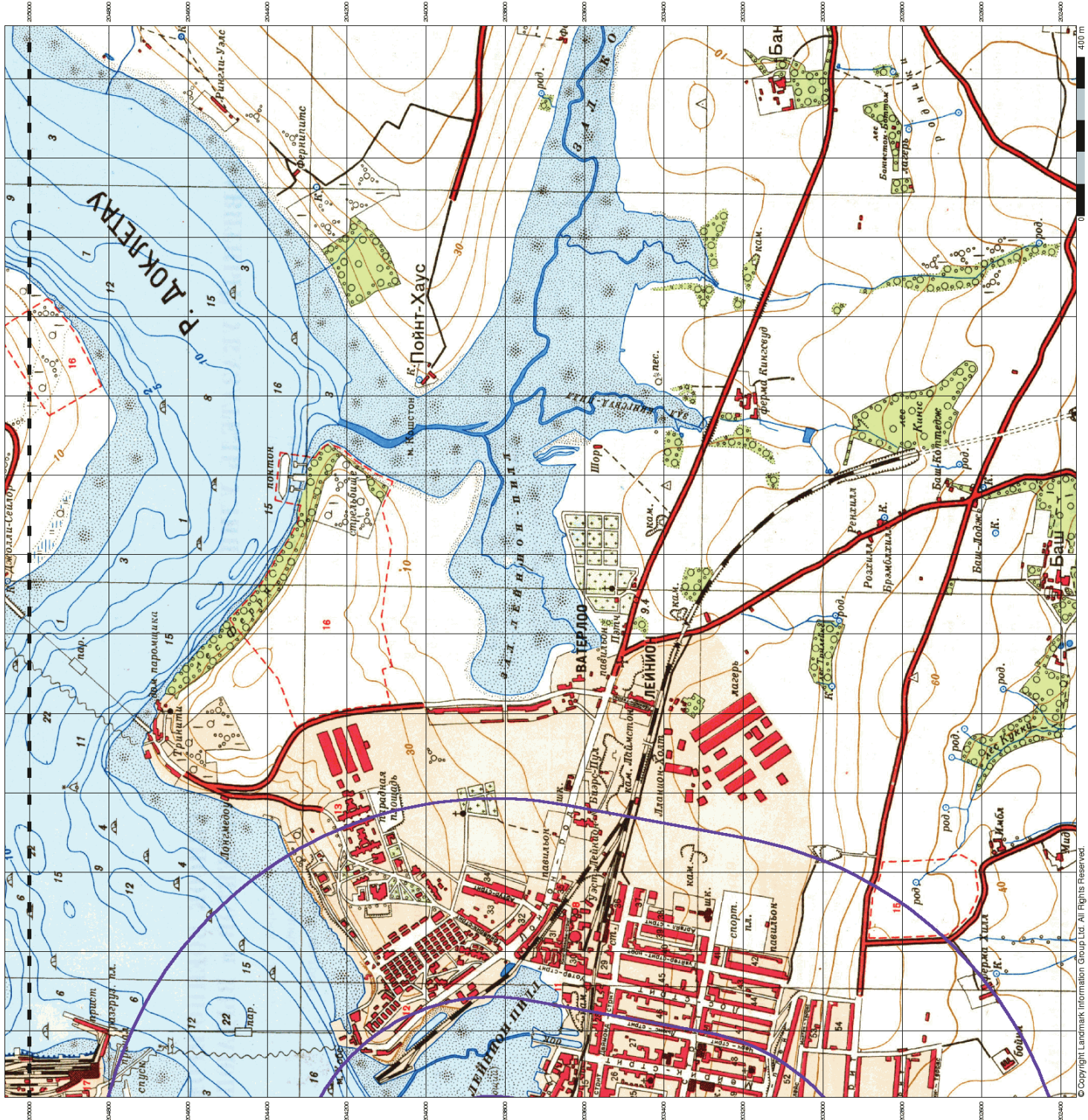
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 196950, 203650
Slice: B
Site Area (Ha): 36.27
Search Buffer (m): 1000

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Pembrokeshire Published 1953

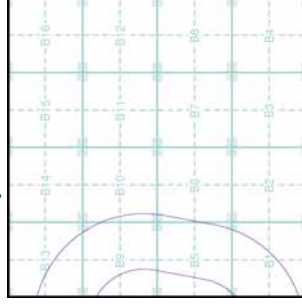
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey, Great Britain and Scotland in the 1940's. In 1864 the Ordnance Survey adopted the Transverse Mercator projection for its maps. The maps were used to update the 1:10,560 maps. The published data then there are often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping on a number of sources. The maps appear 'unfinished' - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

OSBNE	1953	1:10,560
64NW	1953	1:10,560

Historical Map - Slice B



Order Details

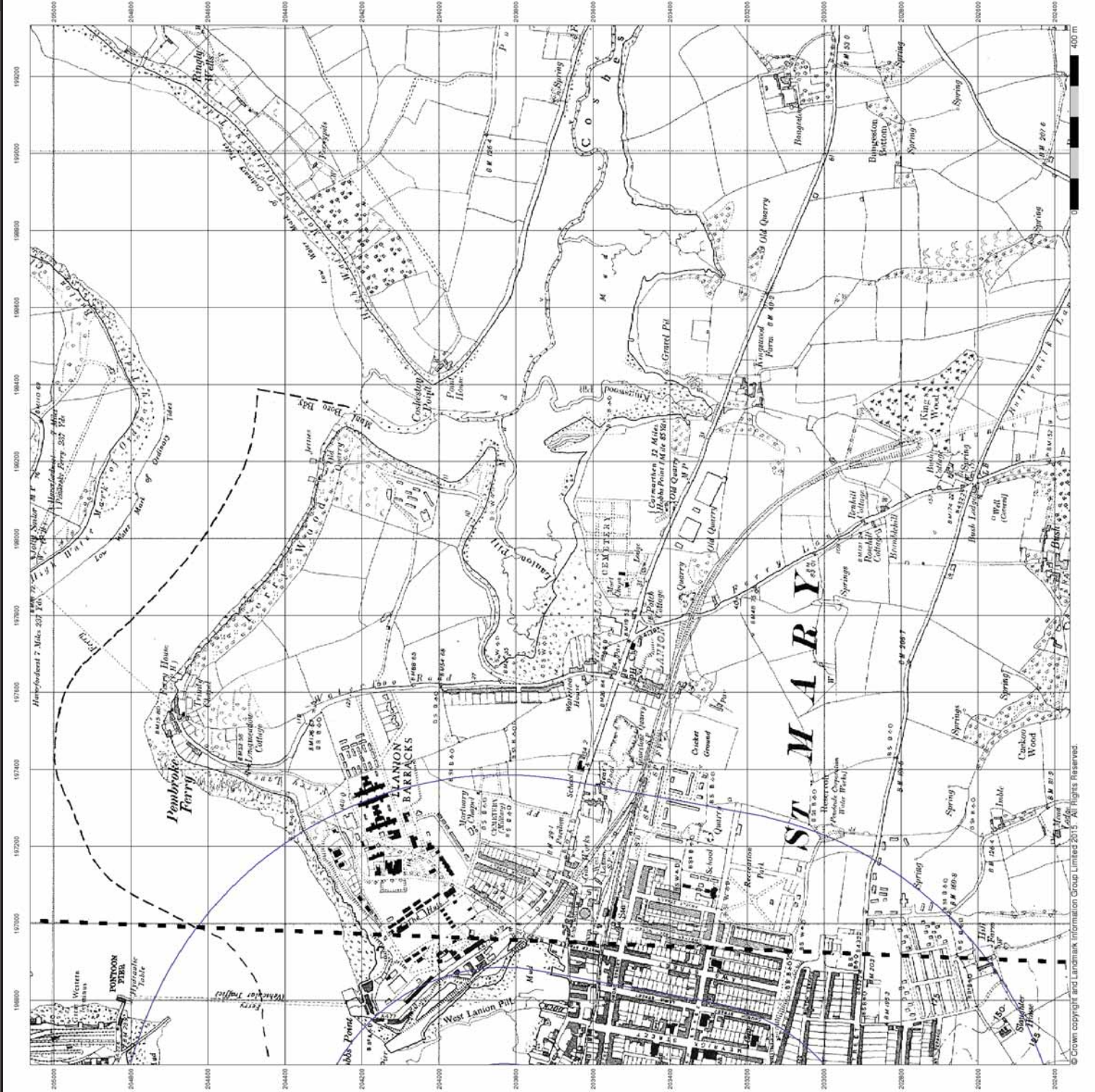
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

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Ordnance Survey Plan

Published 1964

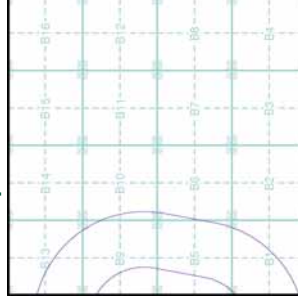
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at a 1:2500 scale in England, Wales and Scotland in the 1840's. In 1864 the Ordnance Survey produced a series of maps at a 1:10,000 scale which are used to update the 1:10,000 maps. The published data is then therefore often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,000 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SM60NE	1964	1:10,560
SM60SE	1964	1:10,560

Historical Map - Slice B



Order Details

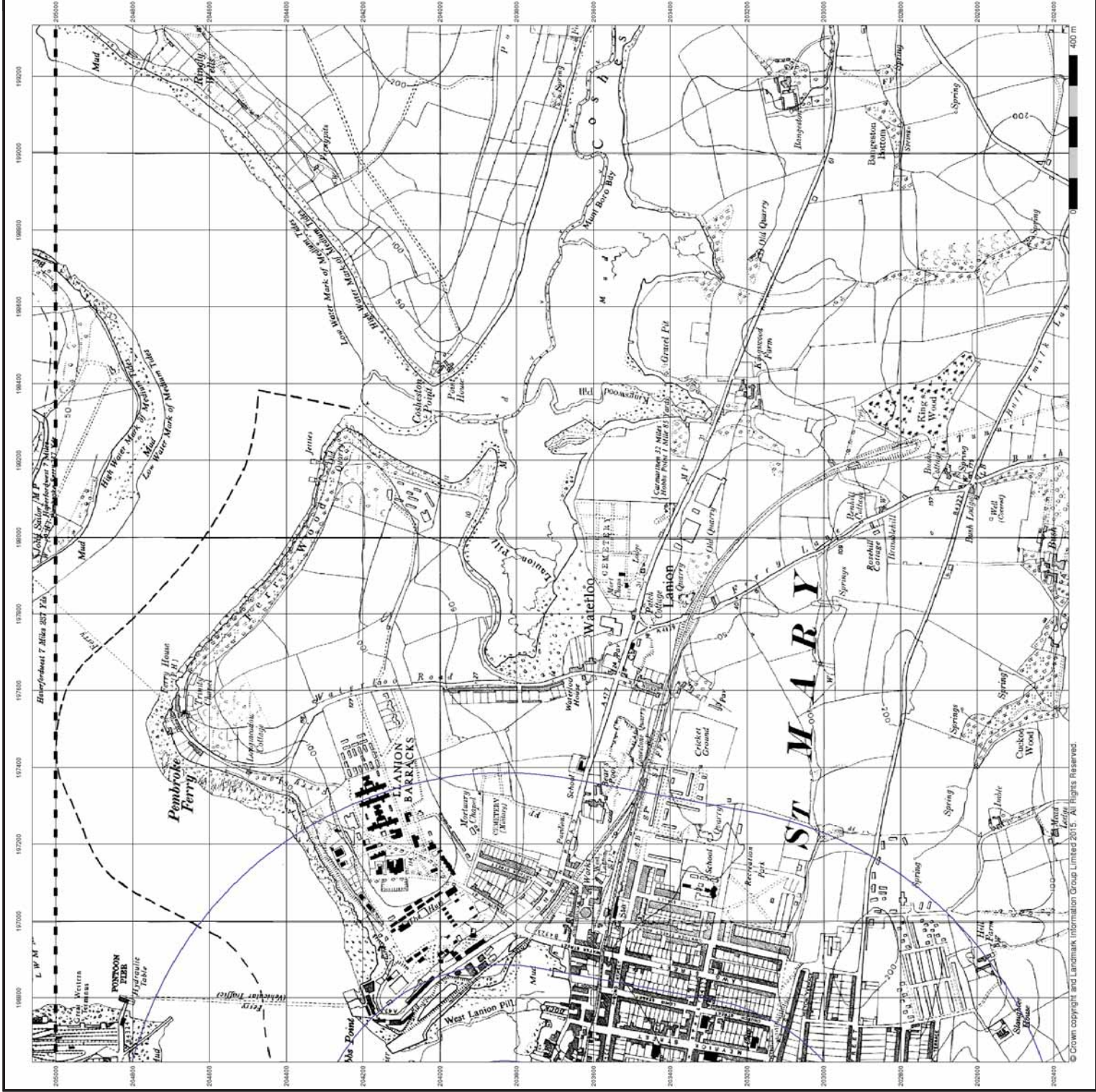
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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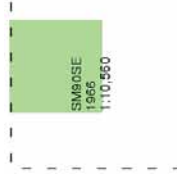
Ordnance Survey Plan

Published 1966

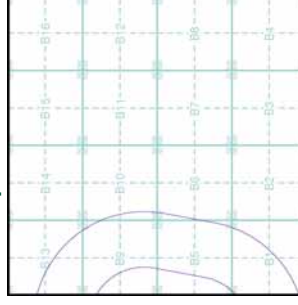
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at a 1:25,000 scale in England, Wales and Scotland in the 1840's. In 1854 the Ordnance Survey began to publish maps at a 1:10,000 scale. These maps are used to update the 1:10,000 maps. The published data is then checked against aerial photography taken after the survey date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,000 mapping from a number of sources. The maps appear 'unfinished' - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

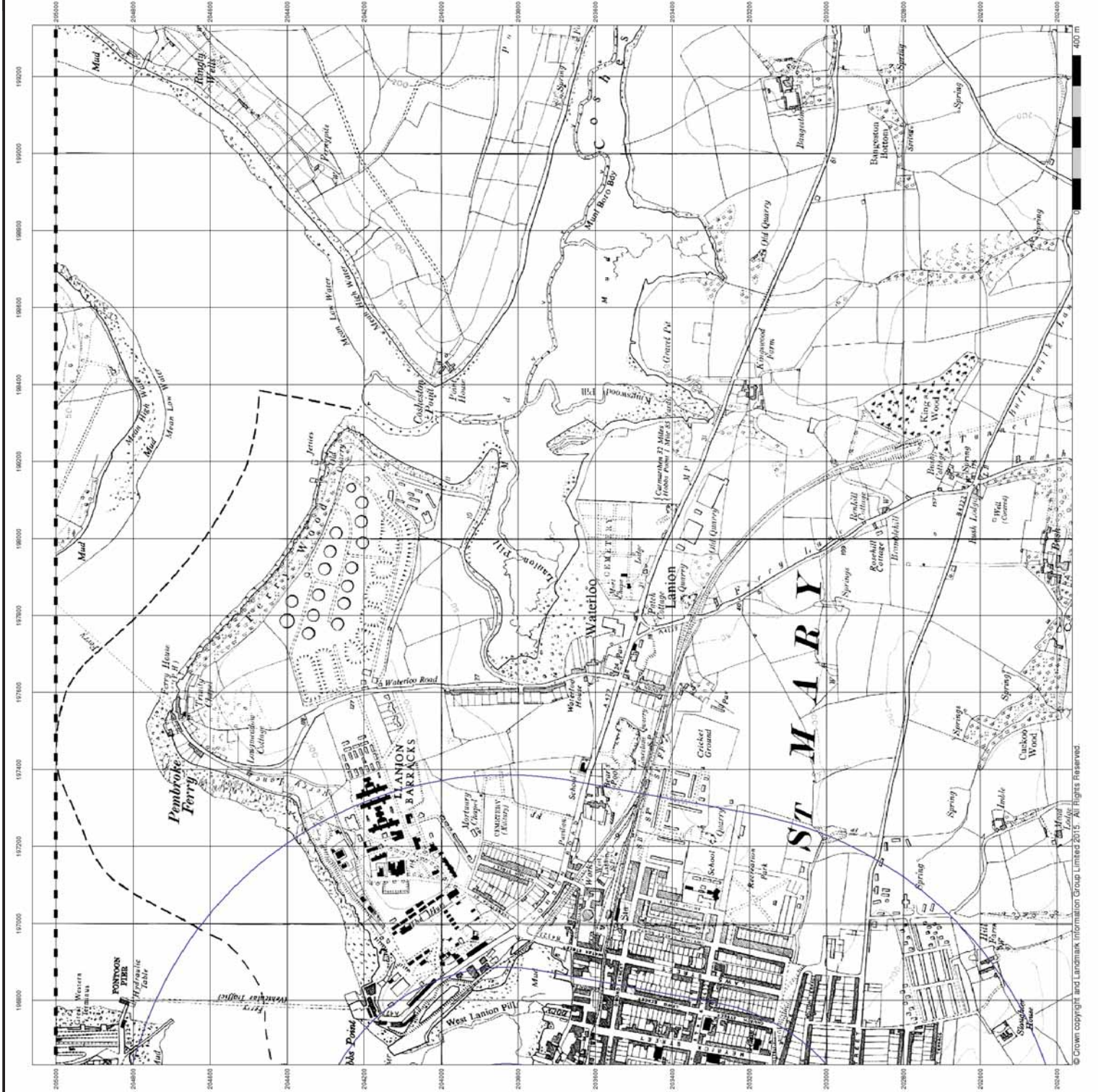
Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 196950, 203650
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Site Area (Ha): 36.27
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Ordnance Survey Plan Published 1971 - 1975

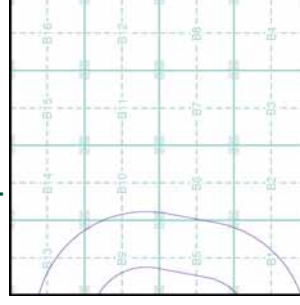
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at a 1:2500 scale in England, Wales and Scotland in the 1840's. In 1854 the 1:2500 maps were updated to a 1:10,000 scale. The maps are often some years later than the surveyed data. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys in outlying county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,000 mapping on a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SM90NE	1975	1:10,000
SM90SE	1971	1:10,000

Historical Map - Slice B



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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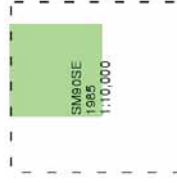
Ordnance Survey Plan

Published 1985

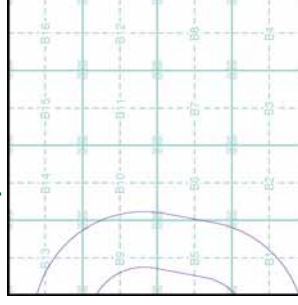
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at a 1:25,000 scale for England, Wales and Scotland in the 1840's. In 1854 the 1:25,000 maps were updated to 1:10,000 scale. The published data is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys in outlying county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's a Provisional Edition was produced, which updated the 1:10,000 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

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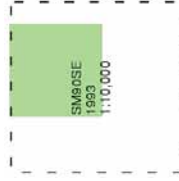


Ordnance Survey Plan Published 1993

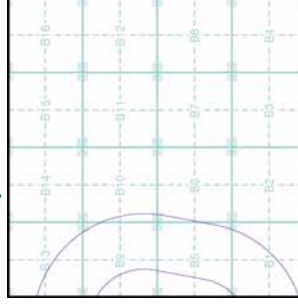
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the Ordnance Survey offices in England, Wales and Scotland in the 1940's. In 1854 the Ordnance Survey was established in England and Wales. The maps shown here are based on the 1:10,000 maps. The published data is then there are often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys in cutting county or group of counties, giving rise to significant inaccuracies in cutting areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,000 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice B



Order Details

Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 196950, 203650
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Site Area (Ha): 36.27
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10k Raster Mapping

Published 2000

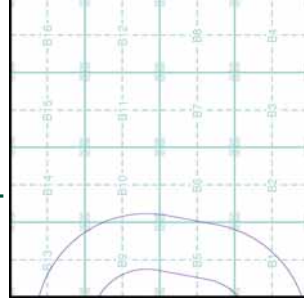
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey's 1:10,000 colour raster maps. These maps are derived from plan data which was collected in 1970. The maps are published at a scale of 1:10,000. The data is highly detailed showing buildings, roads, and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)

- SM30NE 2000 1:10,000
- SM30SE 2000 1:10,000

Historical Map - Slice B



Order Details

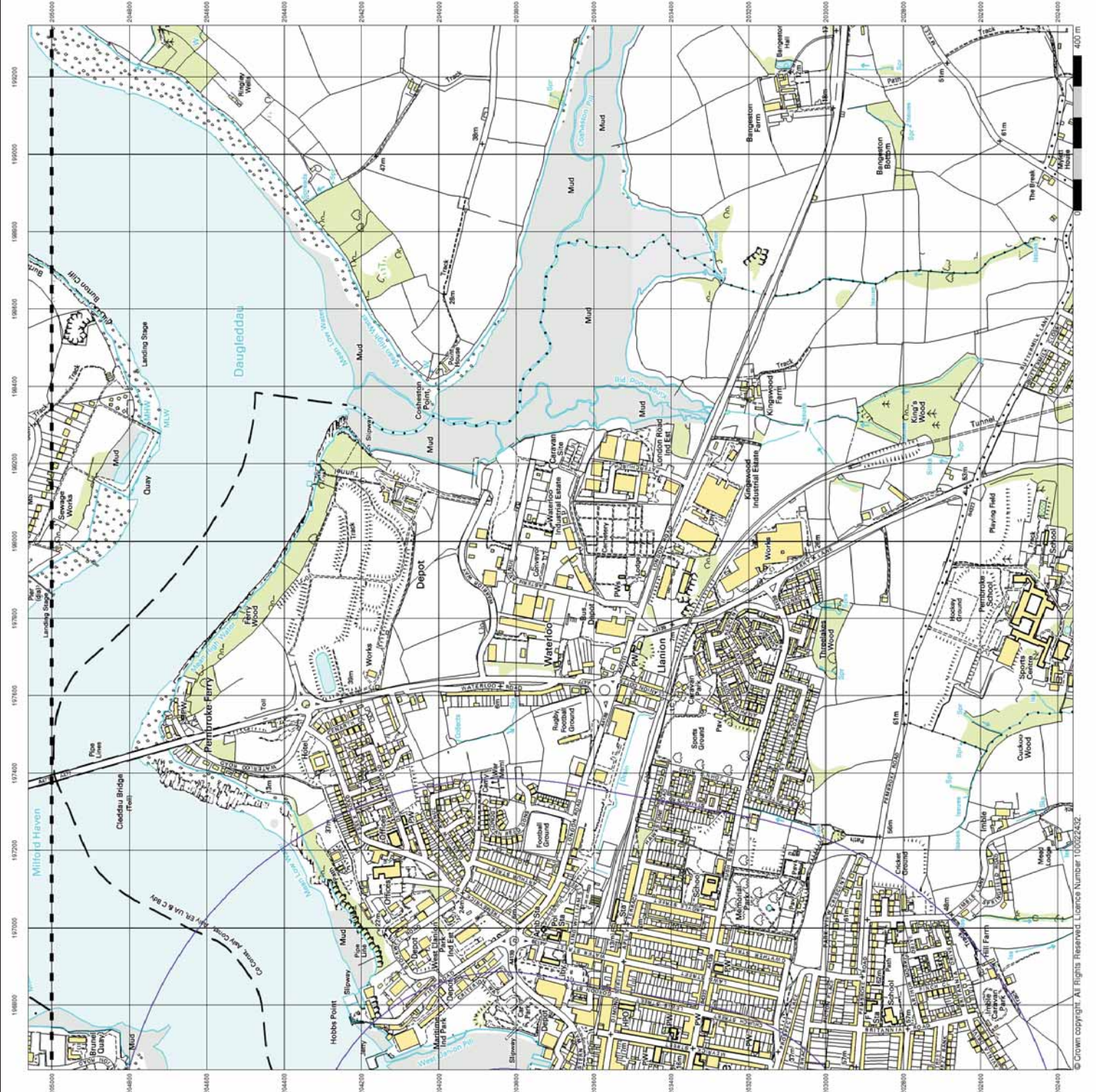
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
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VectorMap Local Published 2017

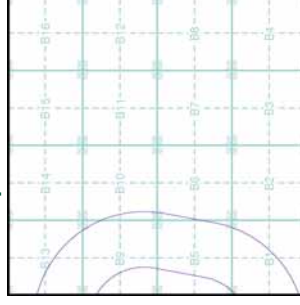
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced using OS's VectorMap Local, a mapping product that has been designed for creating graphical maps of Great Britain. It has been designed for creating graphical maps of Great Britain. OS VectorMap Local is derived from large-scale information surveyed at 1:250 scale (covering major towns and cities), 1:2500 scale (smaller towns, villages and developed rural areas) and 1:10,000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)

- SM00NE
2017
Variable
- SM90SE
2017
Variable

Historical Map - Slice B



Order Details

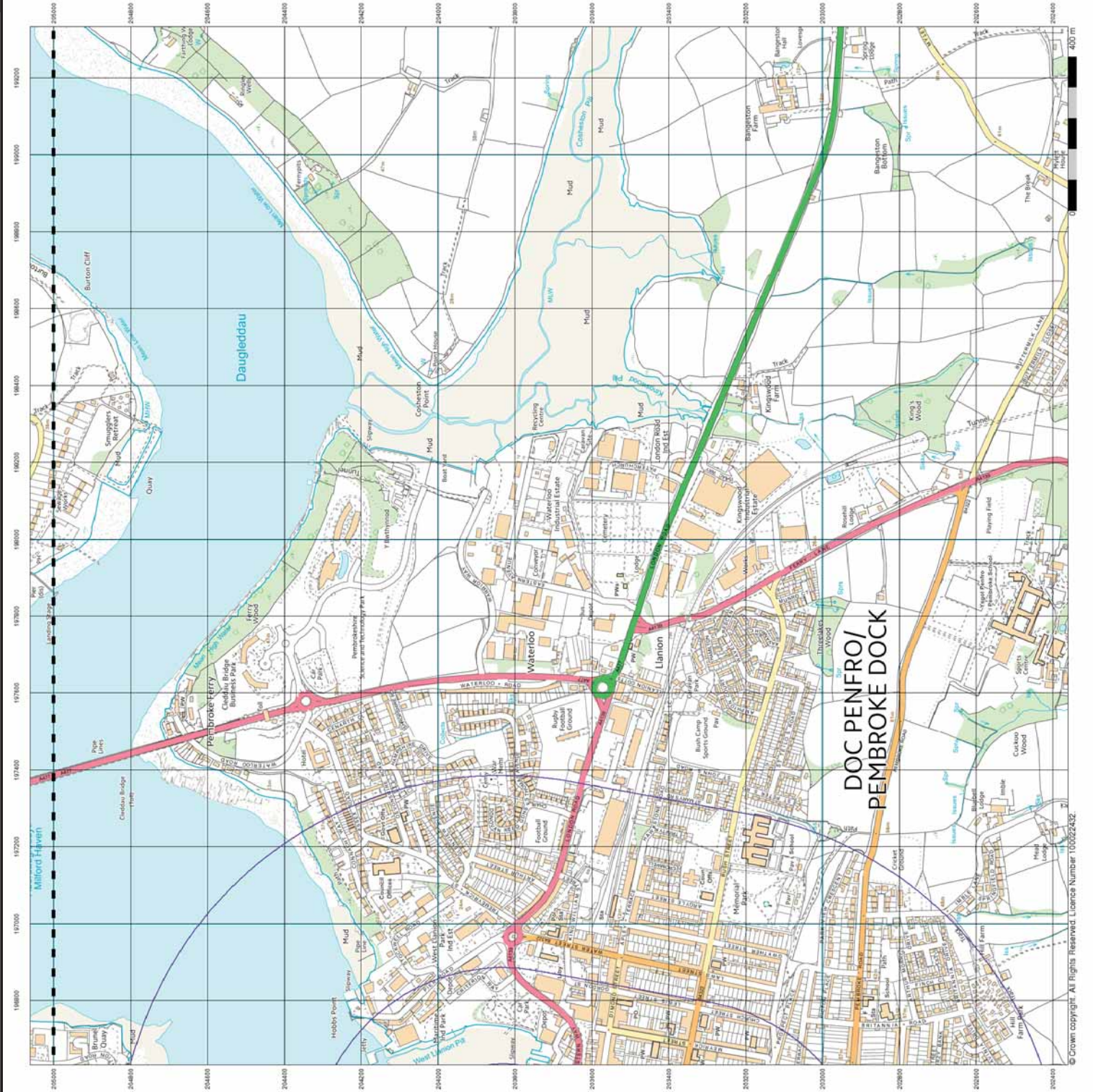
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Site: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
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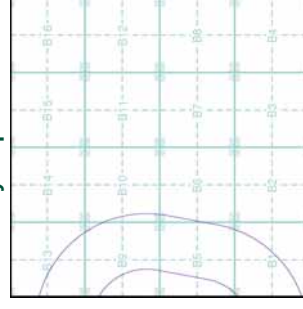
Tel: 0844 844 9952
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- General**
- Specified Site
 - Specified Burier(s)
 - Bearing Reference Point
 - Map ID
 - Several of Type at Location
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
 - Contaminated Land Register Entry or Notice (Location)
 - Discharge Consent
 - Enforcement or Prohibition Notice
 - Integrated Pollution Control
 - Local Authority Integrated Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control
 - Local Authority Pollution Prevention and Control Enforcement
 - Pollution Incident to Controlled Waters
 - Prosecution Relating to Authorised Processes
 - Prosecution Relating to Controlled Waters
 - Registered Radioactive Substance
 - River Network or Water Feature
 - River Quality Sampling Point
 - Substantiated Pollution Incident Register
 - Water Abstraction
 - Water Industry Act Referral
- Hazardous Substances**
- COMAH Site
 - Explosive Site
 - NRMHS Site
 - Planning Hazardous Substance Consent
 - Planning Hazardous Substance Enforcement
- Geological**
- BSS Recorded Mineral Site
- Waste**
- BSS Recorded Landfill Site (Location)
 - BSS Recorded Landfill Site
 - EA Historic Landfill (Buried Pw)
 - EA Historic Landfill (Revised)
 - Integrated Pollution Control (Registered Waste Site)
 - Licensed Waste Management Facility (Location)
 - Local Authority Recorded Landfill Site (Location)
 - Local Authority Recorded Landfill Site
 - Potentially Infringed Land (Non-water)
 - Potentially Infringed Land (Non-water)
 - Potentially Infringed Land (Water)
 - Potentially Infringed Land (Water)
 - Potentially Infringed Land (Water)
 - Registered Landfill Site
 - Registered Landfill Site (Location)
 - Registered Landfill Site (Point, Buffer to 100m)
 - Registered Landfill Site (Point, Buffer to 250m)
 - Registered Waste Transfer Site (Location)
 - Registered Waste Transfer Site
 - Registered Waste Treatment or Disposal Site
 - Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice B



Order Details

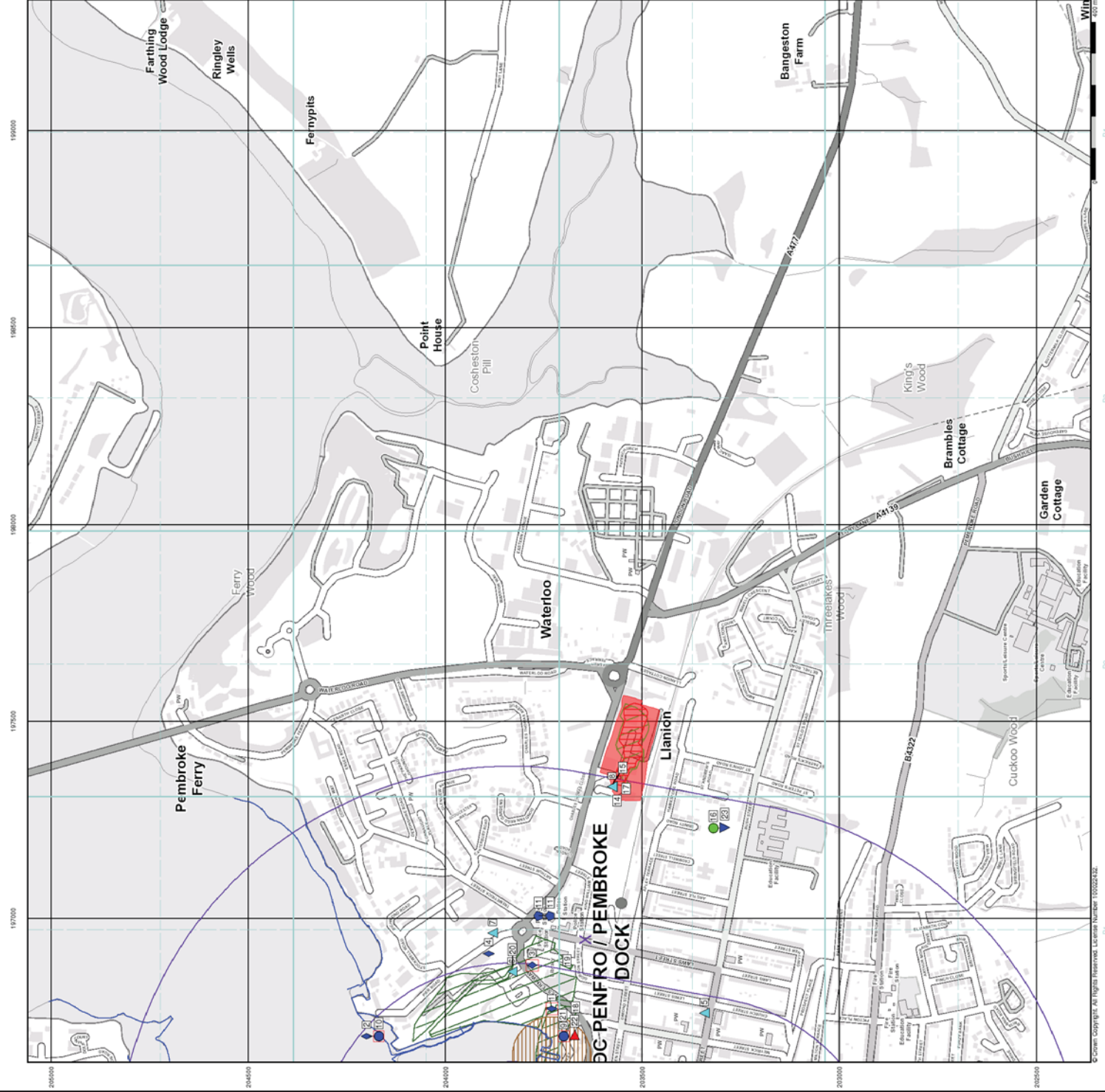
Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

Milford Haven Port Authority, Captain Superintendents Building,
 Admiralty Way, The Dockyard, PEMBROKE DOCK, SA72 6TD



Tel: 0844 844 9952
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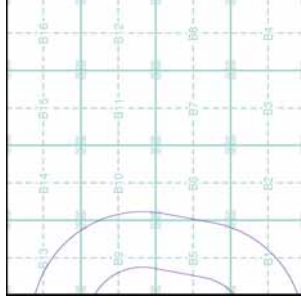




Industrial Land Use Map

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
 - Map ID
- Industrial Land Use**
- Contemporary Trade Directory Entry
 - Fuel Station Entry
 - Gas Pipeline
 - Points of Interest - Commercial Services
 - Points of Interest - Education and Health
 - Points of Interest - Manufacturing and Production
 - Points of Interest - Public Infrastructure
 - Points of Interest - Recreational and Environmental
 - Underground Electrical Cables

Industrial Land Use Map - Slice B



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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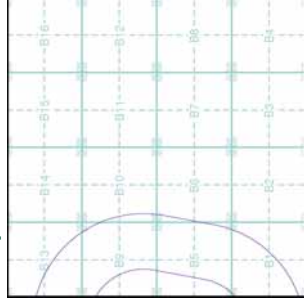
- General**
- Specified Site
 - Specified Buffer(s)
 - X Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence



Flood Map - Slice B



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

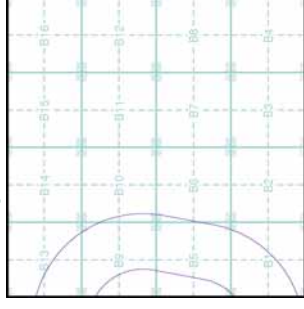
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice B



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

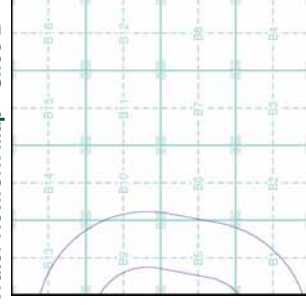
OS Water Network Data

- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in meters)

- Standard Contour
- Master Contour
- Spot Height
- Mean Low Water
- Mean High Water

OS Water Network Map - Slice B



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

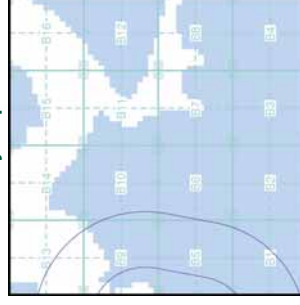
Risk of Flooding from Surface Water

- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

- See the suitability map below
- National to county
 - County to town
 - Town to street
 - Street to parcels of land
 - Property

EANRW Suitability Map - Slice B



Order Details

Order Number: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Site: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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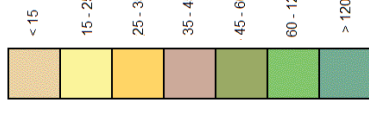


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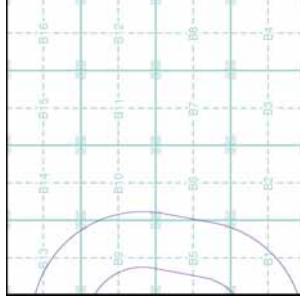
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice B



Order Details

Order Details: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Site: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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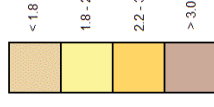


General

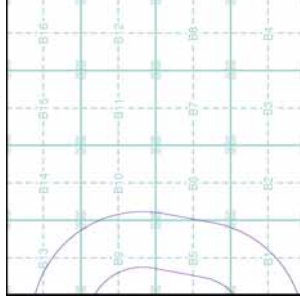
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice B



Order Details

Order Details: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Site: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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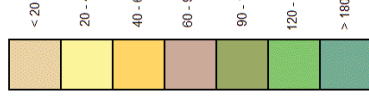


General

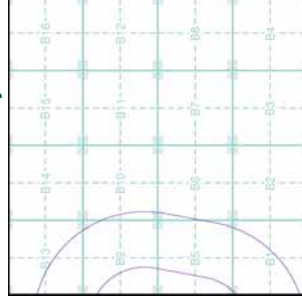
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice B



Order Details

Order Details: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Site: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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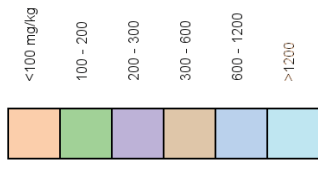


General

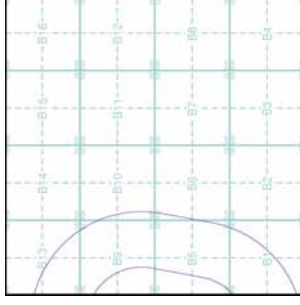
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice B



Order Details

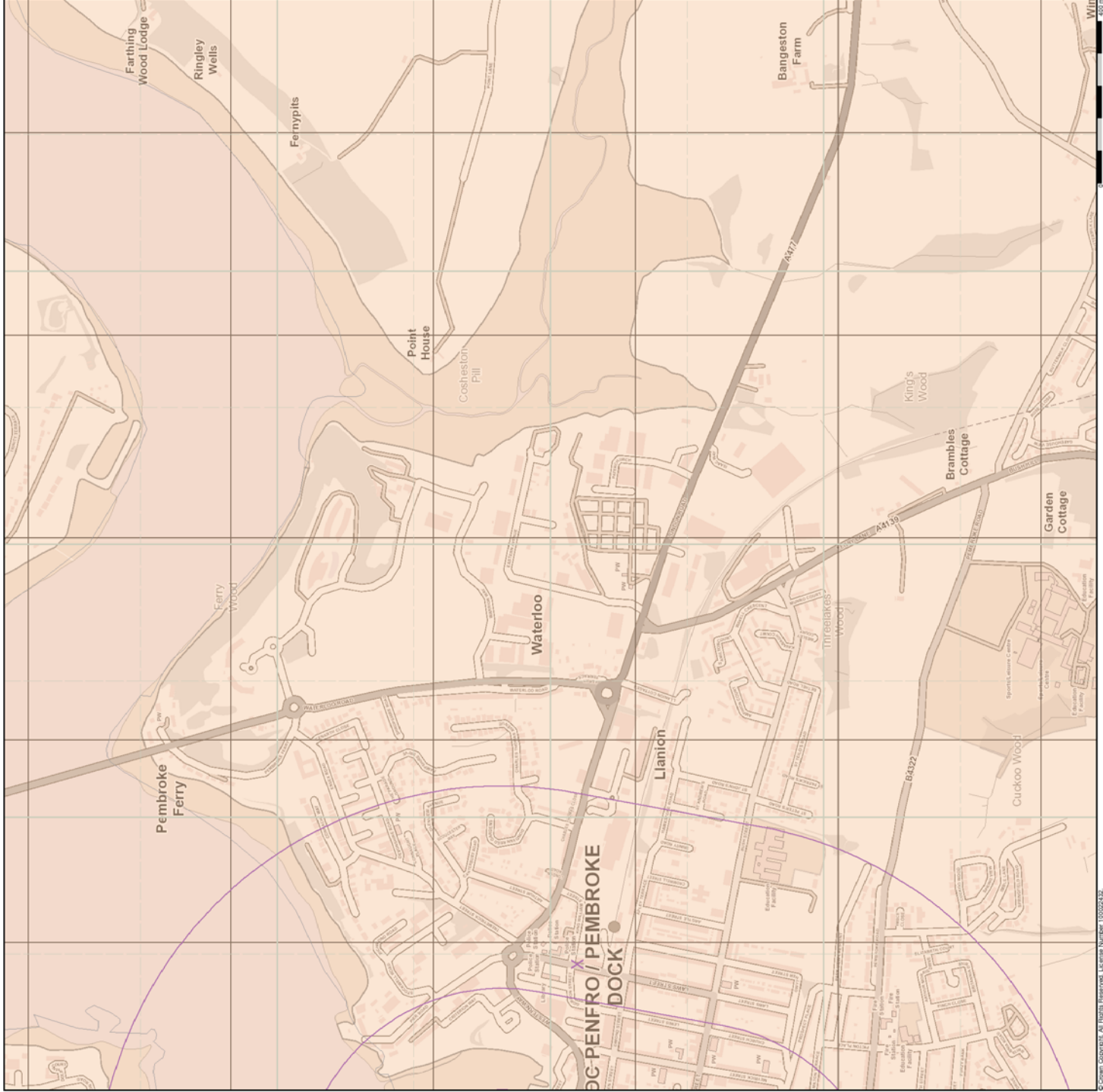
Order Details: 152819812_1_1
 Customer Ref: JER1262
 National Grid Reference: 196950, 203650
 Slice: B
 Site Area (Ha): 36.27
 Search Buffer (m): 1000

Site Details

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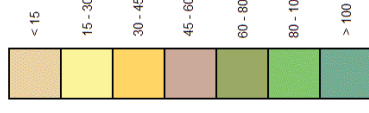


General

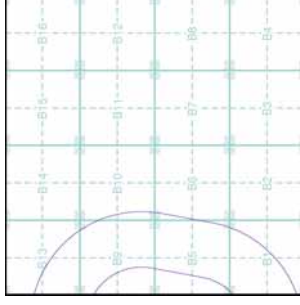
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice B



Order Details

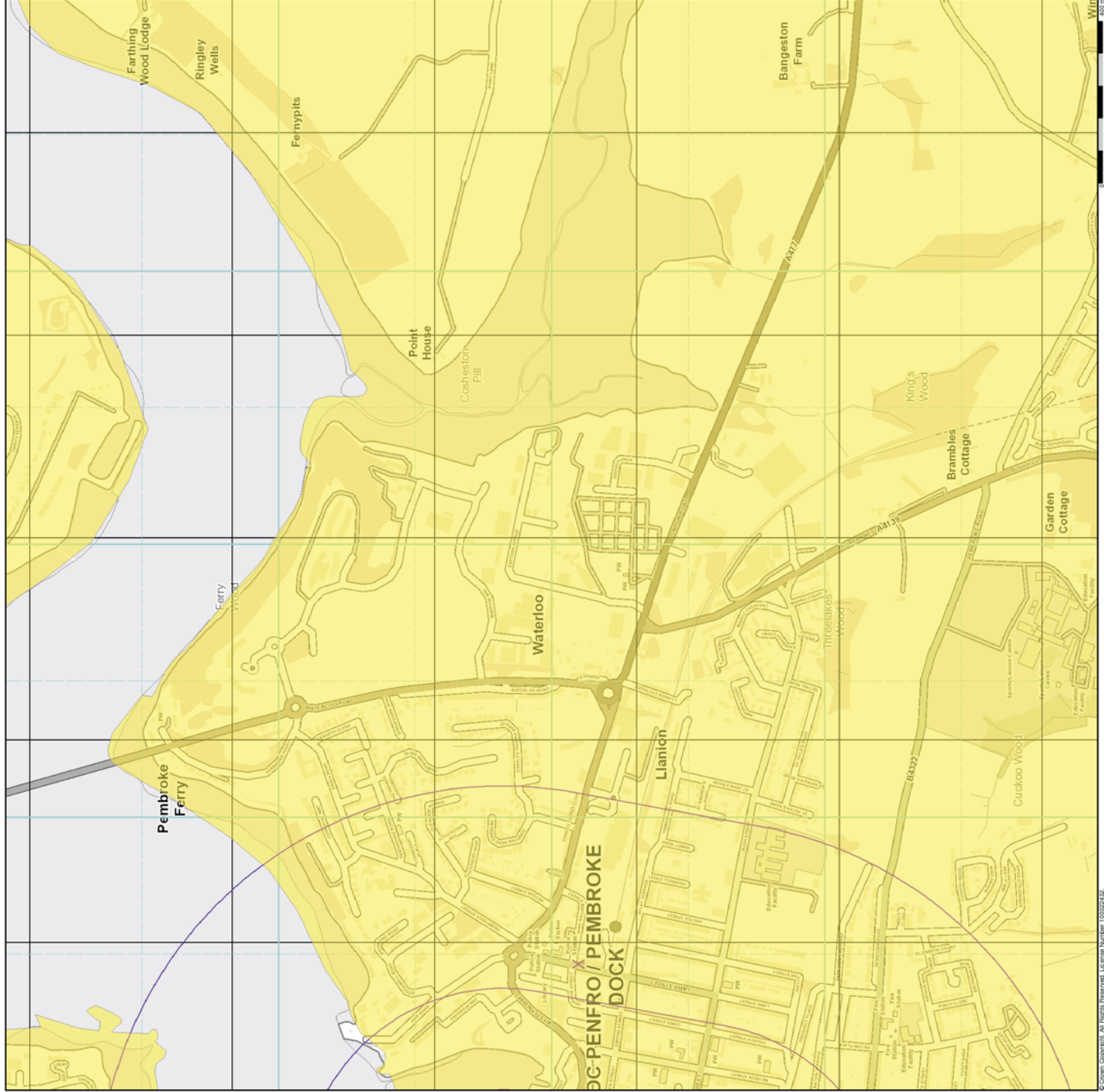
Order Details: 152819812_1_1
 Customer Ref: JER1262
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Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice

Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline) that are referenced by letters of the alphabet, starting from the bottom left corner of the slice 'grid'. This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment

A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant

A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

Client Details

Ms A Thomas, RPS Consultants, 260 Park Avenue, Aztec West, Almondsbury, Bristol, BS32 4SY

Order Details

Order Number: 152819812_1_1
Customer Ref: JER1262
National Grid Reference: 195970, 203710
Site Area (Ha): 36.27
Search Buffer (m): 1000

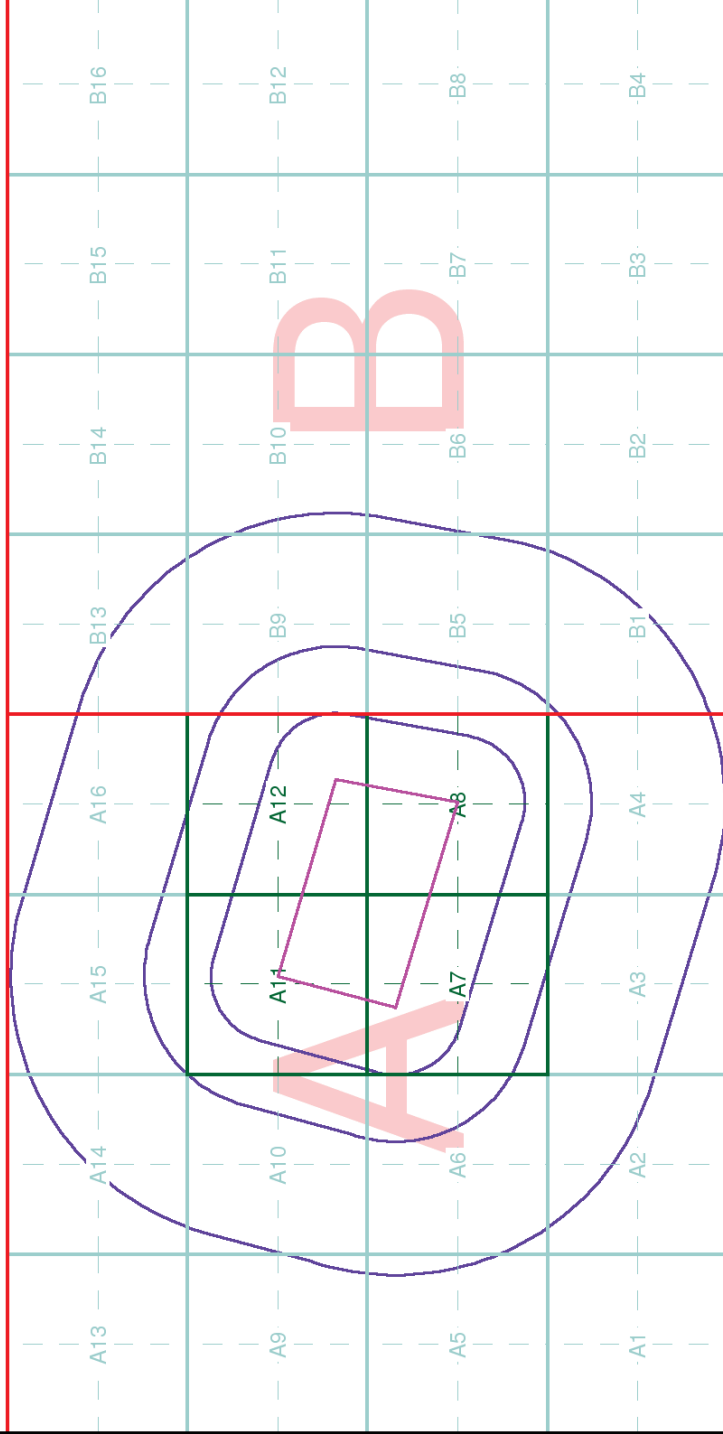
Site Details

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APPENDIX 2: BOREHOLE TABLE

Appendix A

Table of proposed boreholes

Name	Proposed target depth m bgl	Installation/ N	Purpose	Drilling technique	Comments on installation	Additional comments
6-BH01	4.0	Y	To obtain data on shallow soil contamination; To obtain gas and groundwater data from MG.	Rotary	MG expected to be between ~4-6 m bgl. Install within MG only.	Can be terminated shallower when base of MG reached.
6-BH02	15.0	Y	To obtain data on deep soil contamination; To obtain gas and groundwater data from Limestone/Mudstone bedrock.	Rotary	Limestone expected ~8.5 m bgl Install within bedrock only, to base.	Can be terminated shallower where groundwater encountered in bedrock.
6-BH03	4.0	Y	To obtain data on shallow soil contamination; To obtain gas and groundwater data from MG.	Rotary	MG expected to be between ~4-6 m bgl. Install within MG only.	Can be terminated shallower when base of MG reached.
6-BH04 to 6-BH14	3.0 to 5.0	In 3 out of 10	To obtain data on shallow soil contamination in the areas in which historical data is not available and recent activities may have led to contamination; To obtain gas and groundwater data from MG in selected locations. Boreholes BH05, BH07, BH11 and BH14 target the following ongoing contamination sources respectively: fuelling point, substation, scrap yard and substation.	10 no. Window Sampler	MG expected to be between 0.3-5.2 m bgl. Install within MG only.	Can be terminated shallower when base of MG reached.

Notes: MG = Made Ground