Theme	Objective (incl. Stakeholder Workshop votes)	Actions	Timescale	Work-stream	Measuring Progress/Success	2017-18 Progress KEY: White = No progress, Darker indicates progress
Roles and Responsibilities/ Mainstreaming	4.3 Identify and raise resources that can help achieve a prioritised list of actions arising from these aims and objectives.	4.3.1 Review potential funding sources, e.g. EU, SG, HLF, AHRCF, Charities/foundations	Ongoing	PB	Annual amount of investment into SHED Programme; Annual geographic spread analysis of investment into SHED Programme	Robin Turner to meet Allan Leslie to discuss funding
Roles and Responsibilities/ Mainstreaming	4.3 Identify and raise resources that can help achieve a prioritised list of actions arising from these aims and objectives.	4.3.2 Apply for funding, individually or collectively	Ongoing	PB	Annual amount of investment into SHED Programme; Annual geographic spread analysis of investment into SHED Programme	Bid for extension of polygonisation project successful. Will see completion of Scottish Borders, Stirling and Clackmannanshire.
Roles and Responsibilities/ Mainstreaming	5.2 Seek opportunities and identify resources to train professional and non-professional users in the use of Scotland's historic environment data.	5.2.1 Tie in to implementation of the Skills aims of Scotland's Archaeology Strategy, including professional training, secondments and community training	Ongoing	PB	Assessment of number and spread of accredited professionals; Annual No of volunteer training events and number of attendees; Annual No of professional skills training events and number of attendees; Annual No of placements/secondments	SHED postcards taken to conferences
Baseline Data	1.1 Enhance the ability of the current portal, to achieve a comprehensive central point for historic environment information.	1.1.1 Seek additional resources for PastMap development.	Reviewed annually	WS 1	Record Annual PastMap User Statistics	New version of PastMap launched Spring 2018
Baseline Data	1.1 Enhance the ability of the current portal (PastMap), to achieve a comprehensive central point for historic environment information.	1.1.2 Develop automated upload mechanism and/or live or near live feeds for HERs to put their data on PastMap.	2020	WS 1	Record Annual PastMap User Statistics	Discussions underway on supply of data to Improvement Service. Likely that there will be 4 updates per annum.
Baseline Data	1.1 Enhance the ability of the current portal, to achieve a comprehensive central point for historic environment information.	1.1.3 Add Conservation Areas to available overlays	Completed	WS 1	Record Annual PastMap User Statistics	
Baseline Data	1.1 Enhance the ability of the current portal, to achieve a comprehensive central point for historic environment information.	1.1.4 Add World Heritage Sites to available overlays	Completed	WS 1	Record Annual PastMap User Statistics	
Baseline Data	1.1 Enhance the ability of the current portal, to achieve a comprehensive central point for historic environment information.	1.1.5 Add Marine Protected Areas to available overlays	Completed	WS 1	Record Annual PastMap User Statistics	
Baseline Data	1.1 Enhance the ability of the current portal (PastMap), to achieve a comprehensive central point for historic environment information.	1.1.6 Increase resilience of PastMap on multiple platforms	Ongoing	WS 1	Record Annual PastMap User Statistics	New version of PastMap launched Spring 2018: Work with Improvement Service to develop data supply services
Standards	2.1 Influence the development of national and international standards for historic environment data.	2.1.2 Ensure data is INSPIRE compliant	Liaise with PMk	WS 1	INSPIRE compliant data; provision of viewing and downloads services for metadata	HES publishes INSPIRE compliant data on the SSDI
Standards	3.1 Improve interactive abilities of the data, so that it can be used more effectively for research and managing change.	3.1.1 Develop user-focused web services, ideally as linked open data, for existing data sources, and build them in to all subsequent developments	2021 (HES Digital Strategy timeframe)	WS 1	Web services in place and being used. User survey results	SEWeb features some heritage data
Audits and Process Mapping	4.4 Establish processes and procedures that can ensure the security of data from unauthorised access and/or accidental deletion or corruption.	4.4.1 HES to become MEDIN DAC	Completed	WS 1	Mechanisms in place to secure data; Auditable process for custodianship; Auditable process for Disaster/Emergency/ Business Continuity planning	
Audits and Process Mapping	3.3 Ensure that systems can accommodate the need for some data to be kept private, for privacy, legal and site security reasons.	3.3.1 Audit key current systems	2017	WS 1, WS 2	Mechanisms in place to keep data private. ?Number of breaches	No progress
Audits and Process Mapping	3.3 Ensure that systems can accommodate the need for some data to be kept private, for privacy, legal and site security reasons.	3.3.2 Propose amendments to allow for private data (working within legislative constraints, e.g. Data Protection; FoI; etc.)	Ongoing, reviewed annually	WS 1, WS 2	Mechanisms in place to keep data private. ?Number of breaches	No progress
Audits and Process Mapping	3.3 Ensure that systems can accommodate the need for some data to be kept private, for privacy, legal and site security reasons.	3.3.3 Adapt current systems and build appropriate privacy into new ones	Ongoing, reviewed annually	WS 1, WS 2	Mechanisms in place to keep data private. ?Number of breaches	No progress
Standards	1.2 Ensure that information is linked with or between the key data sources and other key portals.	1.2.1 Use current concordance and data linking projects as models to extend this to other areas.	Ongoing with annual reviews	WS 2	Proportion of records with concordance	SHED 4 piloting concordance with museums and archives

Standards	1.2 Ensure that information is linked with or between the key data sources and other key portals	1.2.2 Ensure appropriate standards are in place to enable data sharing	2014-17 and reviewed biannually thereafter	WS 2	Agreed standards in place and being used	No progress
Standards	1.2 Ensure that information is linked with or between the key data sources and other key portals	1.2.3 Identify where SHED data should be embedded in other policy/advisory systems (planning, Water Framework Directive, agriculture etc.)	2014-17	WS 2	Survey of appropriate strategic documents	No progress; awaiting opportunities
Baseline Data	1.3 All data sources to be available online and through web services.	1.3.1 Target HERs that are not yet online and work with them to help achieve this.	2024	WS 2	Percentage of HERs available online.	Discussions within Scottish HBSMR group on a joint bid which would see every HBSMR user get online
Baseline Data	1.3 All data sources to be available online and through web services.	1.3.2 Aim for complete coverage of Scotland in the HER layer on PastMap	2019	WS 2	Percentage of HERs available on Past map.	Exegesis has developed an export routine which should make submission of data to PastMap simpler.
Baseline Data	1.3 All data sources to be available online and through web services.	1.3.3 Explore ways to help data holders to provide data as web services, possibly through a national portal (SE Web? PastMap?)	2017	WS 2	Record Annual Canmore User Statistics	Discussions with the Improvement Service are bringing this forward. Cross reference to 3.1.1.
Baseline Data	1.3 All data sources to be available online and through web services.	1.3.4 Identify funding, advisory support & timetable to achieve all HERs online	2017	WS 2	Number of HERs online and number of HERs contributing to PastMap	See 1.3.1
Baseline Data	1.3 All data sources to be available online and through web services.	1.3.5 Make Properties in Care data available online	2017	WS 2	Assessment of diversity of audience being reached	Links to Properties in Care enabled on Canmore
Baseline Data	1.4 Develop efficient methods for polygonisation where appropriate, for known extents of historic environment assets and for development management purposes, for example to help in managing change and for facilitating research.	1.4.1 Scope and pilot a polygonisation project for Scotland	2015-2017	WS 2	National % covered by each technique	
Baseline Data	1.4 Develop efficient methods for polygonisation where appropriate, for known extents of historic environment assets and for development management purposes, for example to help in managing change and for facilitating research.	1.4.2 Develop polygonisation projects for HER data to complete the coverage of Scotland, and provide a linked national polygonised dataset covering undesignated historic environment sites (i.e. for use on SE Web land information search). Use DSP as a model.	2017-20	WS 2	Methodology signed off; national percentage of coverage.	Shetland polygonisation project finished. Bid successful for funding to complete Scottish Borders, Stirling and Clackmannanshire.
Baseline Data	1.4 Develop efficient methods for polygonisation where appropriate, for known extents of historic environment assets and for development management purposes, for example to help in managing change and for facilitating research.	1.4.3 Pilot New Listed Building elements polygons	Pilot project by 2018	WS 2	Agreed standard in place and being used	
Baseline Data	1.4 Develop efficient methods for polygonisation where appropriate, for known extents of historic environment assets and for development management purposes, for example to help in managing change and for facilitating research.	1.4.4 Pilot Listed Building polygons	Completed	WS 2	New standard applied by HES	
Baseline Data	1.4 Develop efficient methods for polygonisation where appropriate, for known extents of historic environment assets and for development management purposes, for example to help in managing change and for facilitating research.	1.4.5 Scope and pilot a polygonisation project for existing Listed Building elements	?	WS 2	Successful completion of pilot	On hold
Baseline Data	1.4 Develop efficient methods for polygonisation where appropriate, for known extents of historic environment assets and for development management purposes, for example to help in managing change and for facilitating research.	1.4.6 Scope and pilot a polygonisation project for existing Listed Building curtilages	?	WS 2	Agreed standard in place and being used	On hold
Standards	2.1 Influence the development of national and international standards for historic environment data.	2.1.1 Revise polygon technical specifications for historic environment data in Scotland	Sep-16	WS 2	Technical specifications for different HE polygons have been drawn up and made available online	The specifications for Known Site Extents, Areas of Archaeological Interest and Events are available on the SHED webpage. HBSMRv5 has integrated the specifications into the spatial data module (UK-wide). HES - research for an illustrated thesaurus is underway.
Standards	2.2 Ensure that agreed international and national standards are adhered to both within and outwith the sector.	2.2.1 Create a list of appropriate standards, with summary information, links and compliance information; post on web page and update regularly	Ongoing	WS 2	Standards page created on SHED/SMR Forum website	Additional standards have been added to this page. See http://smrforum-scotland.org.uk/shed/data-standards/
Standards	2.2 Ensure that agreed international and national standards are adhered to both within and outwith the sector.	2.2.2 Agree metadata standard	Completed	WS 2	Metadata standard posted online	
Roles and Responsibilities/ Mainstreaming	2.4 Agree protocols for data editing in order to give clarity over roles and responsibilities.	2.4.2. Build on HER/HES protocol for other data curators	2020	WS 2	Editorial protocols in place	No progress

Category	Objective	Action	Timeframe	WS	Measure	Progress
Baseline Data	3.2 Identify gaps in the data and seek ways to address these.	3.2.1 Systematically fill gaps in key data sources, avoiding duplication where possible	Reviewed biennially from 2017	WS 2	Measure the extent to which stakeholders are contributing knowledge/information to the evidence base – i.e. Record annual no of new records created	Internal HES work may help identify gaps in NRHE.
Audits and Process Mapping	4.1, 4.6 Agree and implement ways in which unnecessary duplication of data can be avoided and/or removed; Improve the efficiency of the creation and collation of data when it is gathered from various different sources.	4.1.1 Explore roles of DES, OASIS, Canmore and HERs with regard to event reporting	As per OASIS redevelopment timetable	WS 2	Review of relationships completed and recommendations agreed and undertaken	OASIS redevelopment ongoing
Audits and Process Mapping	4.1, 4.6 Agree and implement ways in which unnecessary duplication of data can be avoided and/or removed; Improve the efficiency of the creation and collation of data when it is gathered from various different sources.	4.1.3 Suggest that the SHED strategy is included in project designs for HLF, HES and AHRC.	Ongoing	WS 2	Agreement reached with funders to refer to SHED; audit undertaken	Approach made to discuss with HLF; Awaiting opportunity
Audits and Process Mapping	4.1, 4.6 Agree and implement ways in which unnecessary duplication of data can be avoided and/or removed; Improve the efficiency of the creation and collation of data when it is gathered from various different sources.	4.1.4 Devise suitable requirements for digital data creation and archiving as part of the planning process, and encourage local authorities to apply these to archaeological conditions	2017	WS 2	Requirements devised and agreed, and implemented in planning conditions	No progress
Audits and Process Mapping	4.1, 4.6 Agree and implement ways in which unnecessary duplication of data can be avoided and/or removed; Improve the efficiency of the creation and collation of data when it is gathered from various different sources.	4.1.5 Compile a list of current online information sources relating to the historic environment	2016	WS 2	List produced and kept current	Information published on SHED webpage
Audits and Process Mapping	4.4 Establish processes and procedures that can ensure the security of data from unauthorised access and/or accidental deletion or corruption.	4.4.2 HES to achieve data Seal of Approval and Trusted Digital Repository Status	TDR - 2017; DSA 2017-18	WS 2	Mechanisms in place to secure data; Auditable process for custodianship. ?Number of breaches; DSA and TDR achieved and maintained	In progress; had hoped to achive by end FYR
Audits and Process Mapping	4.4 Establish processes and procedures that can ensure the security of data from unauthorised access and/or accidental deletion or corruption.	4.4.3 Prepare, disseminate and assist in the implementation of Disaster/Recovery Plans	2018	WS 2	Auditable process for Disaster/Emergency/ Business Continuity planning. ?Number of breaches	No progress
Standards	4.5 Create the facilities to ensure the long-term curation, readability and availability of data.	4.5.1 Discuss potential for long-term data security/readability relationship between HERs and other data holders, and HES	2021 (HES Digital Strategy timeframe)	WS 2	Data security confirmed by data holders	No progress
Standards	4.5 Create the facilities to ensure the long-term curation, readability and availability of data.	4.5.2 HES to achieve Data Seal of Approval and to become a Trusted Digital Repository: See 4.4.2	TDR - 2017; DSA 2017-18	WS 2	See 4.4.2	In progress; had hoped to achive by end FYR
Roles and Responsibilities/ Mainstreaming	5.2 Seek opportunities and identify resources to train professional and non-professional users in the use of Scotland's historic environment data.	5.2.2 Support volunteer training in the creation and use of historic environment data within community engagement/training initiatives	Ongoing	WS 2	Assessment of number and spread of accredited professionals; Annual No of volunteer training events and number of attendees; Annual No of professional skills training events and number of attendees; Annual No of placements/secondments	Work underway on platforms which will help communities of interest submit their work (OASIS, Scotland's Past)
Roles and Responsibilities/ Mainstreaming	5.4 Help others to create data and devise data sources through User-Generated Content (UGC) that has the best fit with agreed standards and principles of Scotland's Historic Environment Data.	5.4.1 Embed good practice standards in major initiatives such as Scotland's Urban Past	Ongoing	WS 2	No of new or updated records through UGC	Conversations ongoing with ScRAP and advice given on data standards and data gathering.
Standards	5.5 Produce guidelines relating to Intellectual Property Rights in order to help avoid copyright and reproduction issues with different media.	5.5.1 Produce guidelines for different users on IPR/copyright, and post on (or link to) SHED website	2017-18	WS 2	Datasets openly available as per Open Data Strategy. Guidelines produced and kept up to date	No progress
Standards	5.5 Produce guidelines relating to Intellectual Property Rights in order to help avoid copyright and reproduction issues.	5.5.2 Support the Open Access Strategy for the sector's publications: See 5.5.1	2017-18	WS 2	See 5.5.1	See 5.5.1

Standards	5.5 Produce guidelines relating to Intellectual Property Rights in order to help avoid copyright and reproduction issues.	5.5.3 Support the Open Data Strategy for the sector's publications	Ongoing, reviewed annually	WS 2	Datasets openly available as per Open Data Strategy	No progress
Standards	5.5 Produce guidelines relating to Intellectual Property Rights in order to help avoid copyright and reproduction issues.	5.5.4 Implementation of Scottish Government Open Data Strategy 2015	2017 for 3* data	WS 2	Datasets openly available as per Open Data Strategy	No progress
Baseline Data	5.6 Encourage the enhancement of content and improve coverage, and provide guidance on how the data all links together.	5.6.1 Develop and guide structured/virtual volunteering (crowd-sourcing projects) to help fill the gaps in data	Development 2014-18, Projects 2018-25	WS 2	Number of records with enhanced content	System being developed for semi-automated statistics on proportion and number of records achieving the standards. Lessons being learned from crowd-sourcing projects such as SUP
Baseline Data	5.6 Encourage the enhancement of content and improve coverage, and provide guidance on how the data all links together.	5.6.2 Develop data links and linked data, and explain how they can be used	Ongoing with annual reviews	WS 2	Number of records with enhanced content	No progress
Baseline Data	5.6 Encourage the enhancement of content and improve coverage, and provide guidance on how the data all links together.	5.6.3 Promote concordance between records	Ongoing with priorities reviewed annually	WS 2	Number of records with enhanced concordance.	being improved via the polygonisation projects
Standards	2.3 Achieve consistency across the data, especially where this will assist the user.	2.3.1 Standardize thesauri and KOS / use Linked Open Data across datasets (i.e. Seneschal project)	2020	WS 2 WS 1	Ability to cross search on PastMap	Workshop held on standardising and mapping period terminology
Roles and Responsibilities/ Mainstreaming	2.4 Agree protocols for data editing in order to give clarity over roles and responsibilities.	2.4.1 HES and HERS to discuss and agree protocols.	2020	WS 3	Editorial protocols in place	No progress
Audits and Process Mapping	4.1, 4.6 Agree and implement ways in which unnecessary duplication of data can be avoided and/or removed; Improve the efficiency of the creation and collation of data when it is gathered from various different sources.	4.1.2 Feed into national projects at development stage to ensure that compatible data structure and mechanisms for data transfer are in place before project starts	Ongoing	WS 3	Review of number of such projects against number with agreement at development stage	HES - engaging in national initiative to develop Regional Research Frameworks; advising relevant strands of Scotland's Rock Art project; developing a graffiti recording project.
Roles and Responsibilities/ Mainstreaming	5.1 Raise awareness of the existence, uses and value of Scotland's historic environment data.	5.1.1 Produce and implement a Communications Plan for the SHED Strategy	2016	WS 3	Comms Plan devised and implemented. User Survey results	Draft comms plan has been circulated for discussion
Roles and Responsibilities/ Mainstreaming	5.1 Raise awareness of the existence, uses and value of Scotland's historic environment data.	5.1.2 Identify & target key political support to achieving SHED outcomes	Ongoing	WS 3	Comms Plan implemented for local and national decision-makers. User Survey results	Comms plan has been drafted
Roles and Responsibilities/ Mainstreaming	5.1 Raise awareness of the existence, uses and value of Scotland's historic environment data.	5.1.3 Actively promote the SHED Strategy through the Archaeology Strategy and other shared initiatives	Ongoing	WS 3	SHED mentioned and reported on in Archaeology Strategy Action Plan	SHED PB members are on Scottish Strategic Archaeology Committee
Roles and Responsibilities/ Mainstreaming	5.3 Initiate a programme of user feedback and engagement in order to identify demands that may be fulfilled through the SHED initiative.	5.3.1 Focus/user group meeting plus additional surveys, etc. as required. See 5.3.2.	Ongoing	WS 3	See 5.3.2	There has been a small user survey carried out on PastMap
Roles and Responsibilities/ Mainstreaming	5.3 Initiate a programme of user feedback and engagement in order to identify demands that may be fulfilled through the SHED initiative.	5.3.2 Consider creation of a Stakeholder Group. See also 4.1.2.	2017-18	WS 3	No of user engagement exercises; Positive/helpful feedback received. User Survey results	No progress
Audits and Process Mapping	5.7 Identify and engage with new partners for the strategy as it develops.	5.7.2 Recognize connections with rest of UK, EU and Worldwide	Ongoing	WS 3	Provide evidence of partnership working	Talk given to summer meeting of UK HER Forum.
Baseline Data	1.3 All data sources to be available online and through web services.	1.3.6 Explore options for linking records to archive and collections records available online	2017	WS 4	Links to archive and collections databases	Meetings held and pilot linking projects underway
Standards	2.2 Ensure that agreed international and national standards are adhered to both within and outwith the sector.	2.2.3 Reference museum standards and guidance for sector	Mar-17	WS 4	Standards page created on SHED/SMR Forum website	
Standards	2.2 Ensure that agreed international and national standards are adhered to both within and outwith the sector.	2.2.4 Reference archives standards and guidance for sector	Mar-17	WS 4	Standards page created on SHED/SMR Forum website	Page has been added and links are being gathered.
Audits and Process Mapping	5.7 Identify and engage with new partners for the strategy as it develops.	5.7.1 Audit and analysis of museum, archive and library datasets that can be linked or shared	2017-2020	WS 4	Provide evidence of partnership working	Work underway on MGS survey, data from which may be used to inform SHED 4
Baseline Data	4.2 Create conditions where the most up to date data is both available and kept up to date.	4.2.1 See 1.1 re live or near live feeds	As 1.1	WS1	Web services in place and current	See 1.1
Baseline Data	4.2 Create conditions where the most up to date data is both available and kept up to date.	4.2.2 Provide datasets as web services – see 1.3	As 1.3	WS1	Web services in place and current	See 1.3